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ABSTRACT

The objectives of this book are: (1) to present a theoretical framework for management by objectives in community colleges, (2) to present information about alternative methods for conducting needs assessment and implementing management by objectives, (3) to present a framework for integrating academic and fiscal planning through management by objectives program, (4) to describe the advantages and the disadvantages of using management by objectives in community colleges, and (5) to advocate management by objectives as a comprehensive technique for improving the quality of education that students receive. The book is organized as follows: Chapter 1. The Discipline of Management and the Community College Context; Chapter 2. Management by Objectives--A Theoretical Framework; Chapter 3. The Measurable Institutional Objectives Approach at Mt. San Jacinto College; Chapter 4. The Participative Management by Objectives Approach at the Coast Community College District; Chapter 5. Management by Objectives and Fiscal Planning; and Chapter 6. Summary. A bibliography is included. (Author/DB)

# Community College Management By Objectives:

## Process

## Progress Problems

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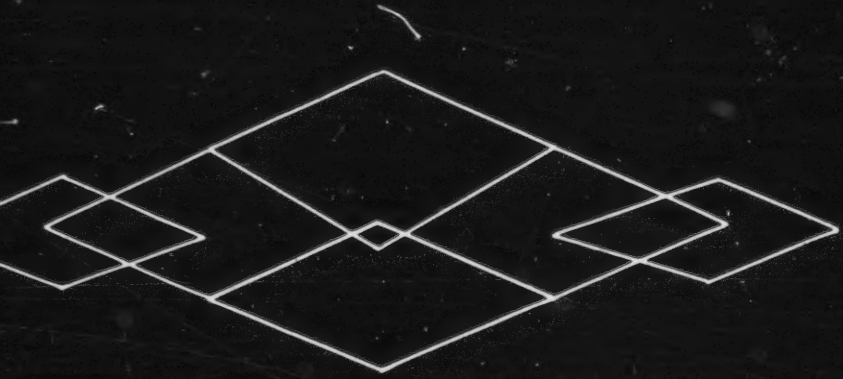

California School Boards Association

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# COMMUNITY COLLEGE MANAGEMENT BY OBJECTIVES:

## Process, Progress, Problems

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William L. Deegan
Thomas Gripp
Milo P. Johnson
Charles McIntyre

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# INTRODUCTION

As we enter the era of accountability in education, it is apparent that community colleges going to need the best possible management tools. Because of concerns by the public and dents about educational quality, uncertain enrollments, the demands for increasing and ersified types of services, and because of the intense competition for operating funds, cost ective and educationally effective operation is essential. This volume is an attempt by the thors to present both a theoretical framework and practical case examples about a new and ntroversial community college management technique – management by objectives.

Until recently, the use of even the term "management" was unacceptable to many mmunity college educators. Yet, management – the judicious use of means to accomplish an l – is an indespensible task for trustees, administrators and faculty alike. The authors have rposely chosen to use the term "management," which includes the tasks of planning, anizing, communicating, motivating, and evaluating, rather than many of the euphemisms ich have been used in the past. The time is upon us to recognize that management does occur community colleges and management is precisely what the authors feel it should be called. wever, management does not mean manipulation or authoritarian rule. The approaches to nagement advocated in this volume require extensive participation, sharing, and responsibility all those involved in community college education.

The book contains a unique combination of both theory and practice, with discussion ging from business management theory through educational management theory to the ation of management by objectives within that theory. The full range of techniques for eloping institutional objectives within the process of management by objectives is examined. o institutional examples, one from a large, multi-campus community college district, and one m a small rural campus are presented, describing how these colleges have attempted to assess eds, develop objectives, and evaluate and revise programs using quite different management by ectives techniques. Several popular approaches to community college needs assessment are nd seriously wanting in spite of their theoretical appeal. New theoretical contributions, luding a thorough discussion of currently unmeasurable objectives, reducible and irreducible straints, the advantages and disadvantages of management by objectives application in ucation, and the use of the educational audit as an accountability technique are included. The ok also examines the problem of tying academic and fiscal planning through management by ectives.

The objectives of the book are as follows:

1. To present a theoretical framework for management by objectives in community

colleges.

2. To present information about alternative methods for conducting needs assessment and implementing management by objectives.

3. To present a framework for integrating academic and fiscal planning through the management by objectives program.

4. To describe the advantages and the disadvantages of using management by objectives in community colleges.

5. To advocate management by objectives, not simply as a management device, but more importantly as a comprehensive technique for improving the quality of education that students receive.

The book is organized as follows:

**HAPTER I – The Discipline of Management and the Community College Context**

Chapter I reviews some of the major problems confronting community college management nd sets forth two proposed prerequisites for more effective community college management. he evolution of management theory is reviewed and new management techniques are discussed. he chapter also presents a research description of the community college context in which the anagement process occurs, and discusses the importance of developing a management plan to eet the unique needs of that context.

**HAPTER II – Management by Objectives – A Theoretical Framework**

Chapter II sets forth a definition of management by objectives and discusses the basic nderlying theory of management by objectives. A step-by-step outline of the management by bjectives process is a major part of the chapter. The chapter also discusses the advantages of anagement by objectives to community colleges as institutions, and the advantages of anagement by objectives for constituencies with which community colleges are involved, cluding the public, trustees, faculty, administrators, and students. A discussion of problems and ngers for readers to consider in implementing the management by objectives process is the ocus of the final section of Chapter II.

**HAPTER III – The Measurable Institutional Objectives Approach at Mt. San Jacinto College**

Chapter III describes how a small rural community college has implemented its own unique pproach to management by objectives. The chapter discusses the development of the college

ducational program including the planning, organization, implementation, and evaluation of anagement by objectives. Information is also presented on the issues of dealing with nmeasurable institutional objectives, the problems of constraints and constraint reduction, and he educational audit as an effective accountability technique.

**hapter IV – The Participative Management by Objectives Approach at the Coast Community ollege District**

This chapter discusses the functions of management in a humanistic context, including articipative planning, participative programming, participative budgeting, and participative valuation. Alternative approaches to conducting needs assessment are discussed, and the process nvolved in implementing this humanistic approach to management by objectives at the Coast ommunity College District is presented.

**HAPTER V – Management by Objectives and Fiscal Planning**

In this chapter, various aspects of management by objectives are related to fiscal planning. A ariation on the normal cost-benefit analysis is suggested for purposes of explicitly treating the ualitative as well as the quantitative objectives of the college. This analytical framework relies n well-developed objectives for constructing preference orderings of alternative programs and esource mixes. Objectives dealing with access and quality are compared directly to costs of lternative college programs. A basis for comprehensive institutional planning is developed in hich academic and fiscal planning and programming are conducted simultaneously and ommunity college managers are provided with explicit information upon which to base ecisions.

**HAPTER VI – Summary**

The summary chapter discusses the major issues raised throughout the book and concludes ith the advocacy of management by objectives as an alternative to current management ractices, and more importantly as an effective educational technique rather than merely a rocess to be superimposed on the educational program.

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Sacramento, California, January 24, 1974

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## CHAPTER I

## THE DISCIPLINE OF MANAGEMENT AND THE CONTEXT OF EDUCATION

- A 1972 Harris Poll assessing public confidence in American education found that only 33 per cent of the American public has a great deal of confidence in America education

- In California, voters approved only one of five school bond elections in a twelve-month period during 1971-72, and voters approved only about half of 190 school operating tax elections during the same period

- A Gallup Poll in 1970 revealed that 80 per cent of the people want some better form of accountability for the 20 cents of every tax dollar which is being spent on education

- In New York State, a bill has been introduced to create the "State Office of Education Performance Review" to oversee spending in the State Education Department

Increasingly, in both the general news media and the specialized publications of the ducational world, the optimism and support which helped provide the tremendous growth and evelopment of educational institutions in the 1960's is being replaced with a growing clamor of oubt, cynicism, and sometimes outright hostility. Clearly, the 1970's are the era of ccountability, efficiency and emphasis on results for the dollars spent on education.

New social needs such as environmental pollution control and urban renewal, a declining ate of growth in college attendance, a growing taxpayer resistance to providing additional dolla esources, and student expressions of dissatisfaction with the results of their college experienc ave all combined to change the public support for education as a top priority. As the report o he assembly of the American Association of Community and Junior Colleges recently stated The time has passed when education has viewed as a magic panacea for problems (Chronicle o ligher Education, December 11, 1972, Pg. 4)."

The community colleges, because they are most clearly the "people's colleges," must tak teps to meet the challenges of scarce resources, public demands for dollar cost effectiveness, an tudent demands for more effective educational results. One technique currently being suggeste y a number of authors (Lahti 1971, Johnson and Grafsky 1973, Hitt 1973) to help meet som f the problems presented by the public and student demands for more effective accountabilit nd results for dollars invested in community college education is the management by objective pproach to community college management. An increasing number of management theorist iew management by objectives as a systematic and comprehensive management technique whic elps insure the performance and assessment of the major functions of management – planning

ganizing, communicating, motivating, and evaluating.

The community college educational world is currently involved in a major debate over nagement by objectives. To some, management by objectives provides the promise of a nagement technique and a planning tool that will allow for measurement of the relative cess of educational programs. To others, management by objectives raises fears of an emphasis the trivial, of a bureaucratic paper shuffling nightmare, or of systems analysts choking all of intellectual vigor and academic freedom from the colleges.

It is the purpose of this volume to review the process, progress, and problems of nagement by objectives as a management technique to help deal with the many problems that nfront community college educators in the 1970's. Let us begin the discussion of management objectives with a review of some of the current problems of education which must be solved if lleges are to maintain an adequate level of public and fiscal support.

## me Major Problems in Education

A review of the literature of education, and a review of the themes of the major news media urces outside the educational world uncovers a number of general problems which educators ust solve in the 1970's. The attention that these problems has received presents great challenges not only in solving the problems, but also in convincing the legislators, the public, and students at progress has been made.

A first serious problem is the problem of student and public dissatisfaction with the results education. This is a problem which confronts education at all levels. There are an estimated 25 llion students in this country who are functionally illiterate; there is a 70 per cent dropout rate the poverty-stricken urban areas; and one-third of the high school graduates taking a th-grade level Armed Forces qualifying exam fail it (Nordh, 1971, Pg. 3). Nearly 2.5 million udents leave the formal education system in America each year without adequate preparation a career. In 1970-71, there were 850,000 elementary and secondary school dropouts; 750,000 neral curriculum high school graduates who did not attend college; and 850,000 high school udents who entered college in 1967 but did not complete the baccalaureate or an occupational ogram (U.S. Office of Education, 1971, Pg. 1). All of these problems have occurred despite the ct that more money than ever, an estimated 65 billion dollars, is being spent annually on ucation.

A second serious problem facing education is confusion and ambiguity over goals and jectives. A recent publication of the Academy for Educational Development summarized the oblem by stating: "When business managers look at higher education, their first impression is e of confused objectives. Everyone is familiar with the usual trio of purposes: instruction, earch, and public service. The problem is that these broad goals generally lack operational

meaning (1972, Pg. 3)." There frequently appears to be both confusion about the operation measures of broad goals and objectives, and some reluctance to have programs assessed in ter of accomplishments, costs, and cost/benefit relationship for the public dollar invested. T development of clear institutional goals and objectives, and the translation of those goals a objectives into programs which are systematically evaluated must become a major imperative community college education in the 1970's. As O'Bannion has written: *"The community juni college may be beginning a journey toward total institutional involvement in the evaluation student learning. By 1980, that journey may have progressed to the point where administrato student service personnel, and instructors who are unfamiliar with the formation and evaluati of objectives may be left behind* (1972, Pg. 69)."

A third problem confronting educators is the frequent inability of colleges to articulate the public both the reasons for needs and the outcomes of increased investment in educatio programs. Higher educatio. lost much public favor in the negative publicity given to stude demonstrations, riots, and protests in the mid and late 1960's. Today, many colleges still ha not often mounted aggressive public information campaigns to articulate to the public t benefits and the positive aspects of the college experience. As Johnson has written: *"The pub needs to be assured that the dollars they provide are being effectively utilized and that a serio effort is being made to accomplish agreed-upon objectives in a more cost effective manner. order to continue to receive adequate financial support, a means of demonstrating accountabil is essential* (1973, Pg. 1)." There is much comment among spokesmen for higher education abo needs and problems. For example, we hear that there is a need for more career education, there is a need for more baccalaureate education in the arts and sciences, or a need for mo educational television. These kinds of statements are widely reported through the media, b they are seldom accompanied by specific useable information about the manner of determini the existence of this particular need, the extent of the scope of the need, or the cost of meeti the need. Unless community colleges can better articulate to the public the reasons behind t needs, and the outcomes to be gained for additional dollars invested, it will be increasing difficult to maintain financial support in the decades ahead.

A fourth major problem involves the forces of vested interests in the educatio community itself. The history and tradition of education and academic freedom make the ve term management anathema to many faculty and students. Yet, without some overridi institutional purposes, without a coherent philosophy and a set of institutional goals a objectives, colleges can become fragmented battlegrounds for various vested interests both with and outside of the academic community (Clark, 1963 and Moony, 1963). The end result can b situation where positive leadership and coherent institutional purposes are impossible. The on power for change may be negative power – the power of veto. As many students and facu have pointed out, the college experience must be more than the sum of its parts – not jus collection of unrelated events. Some more effective devices for clarifying institutional purpo

nd for unifying educational effort must be found.

A fifth major problem involves the relative scarcity of public funding. The above-mentioned ampus disturbances of the late 1960's, generally more conservative attitudes toward the role of he public sector, and the emerging concern for problems such as environmental preservation, rban renewal, or tax reform all make it relatively more difficult for community colleges to btain public funding. In most states, local college support is accompanied by significant tate-level funding. The withdrawal of funding by one governmental level does not automatically ssure greater participation by the other level. Consequently, colleges find themselves in a inancial "squeeze" due to funding techniques and competition. Where college enrollment growth as declined, funding problems may appear which occur in slow or zero growth situations. Costs er student may grow disproportionately due in part to aging resources and the inability to apitalize on increasing economies of scale. Clearly, the 1970's will be a time of increased ompetition for scarce resources.

Thus, we appear to be at a crucial point in educational history. Much of what has developed n educational management practice is the result of crises, accident, and chance rather than areful planning. The problems of the 1970's demand that more effective management tools be mplemented to help clarify and unify purposes, to help plan and implement needed changes, to elp evaluate the results of educational programs, and to more effectively utilize scarce resources. n the fall of 1972, nearly 2,625,000 students were attending over 1,100 community colleges in merica. This is four times the number of community college students as in 1960, and nearly louble the number of colleges. According to the predictions of the Carnegie Commission for Higher Education, the United States will need to establish between 230 and 280 more ommunity colleges if university branches and specialized two-year institutions do not develop nore comprehensive programs (1970, Pg. 1). To justify this kind of expansion, community olleges must better articulate what it is they do, how they do it, and what benefits result from heir efforts. The process of justification and accountability offers both opportunities and roblems. How community colleges deal with these opportunities and problems may have rofound implications for the future quality of community college education.

The opportunities from increased accountability, for community colleges, include the pportunity for improved relationships with the community through specification of objectives n more precise terms, the effective use of scarce educational resources, the elimination of uplication and overlap where it exists, the possibility of planned innovation and evaluation of nnovation to see which programs do indeed make a difference, and the more effective valuation of educational outcomes as a basis for change. The discovery of new needs and the etention and defense of existing programs will also be increasingly possible with increased ccountability.

The dangers of the accountability movement can result from overzealous involvement of

cians and people from the community who become involved in emotional issues, from an asis on the trivial and quantitative as opposed to the qualitative, and from the belief by that the practices and policies of management that have proved successful in the world of ess can easily and effectively be imposed on the context of education with the same results. much effective management theory and practice has developed in the business world, there be a recognition of the special character and context of the community college, and the rences between business and education in goals, values, authority relationships, and the al environment in which the management process must occur. It is a primary thesis of this ne that effective management in community colleges is facilitated by knowledge about two num prerequisites: (1) an understanding of the discipline of management, and (2) an rstanding of the community college context in which the management process must occur. remainder of this chapter will be devoted to the discussion of these prerequisites to effective nunity college management. The specific topic of management by objectives will be ssed in Chapter II.

## Discipline of Management

An important prerequisite for effective community college management is a recognition that is a discipline of management with a set of skills and professional duties which can be ed and learned. An understanding of the discipline of management should entail the study of major functions of management, the human dimensions of management, and the fications in management practice imposed by differing contexts where the management ess occurs. For our purposes in this volume, management is defined as the judicious use of s to accomplish an end. The management process includes the tasks of planning, organizing, nunicating, motivating, and evaluating. As basic as these tasks appear, the use of even the management may cause problems in an educational community. There has often been a tance by many in education to recognize that a discipline of management exists. Yet, out a discipline of management, we are left, as Drucker writes: *"Without the ability to make general statements, and cannot, therefore, predict the outcomes of actions or decisions, and udge them only by hindsight and by their results – when it is too late to do anything* (1958, 2)."

Too frequently, educators approach managerial positions with little or no preparation for ask at hand. The skills that a man possesses as a scholarly historian may have only a heral relationship to the work demands of his new task as a college president. Training and ration in the discipline of management, in addition to mastery of an academic specialty, d help better prepare more effective educational managers.

While it is obvious to the historian that nearly every human endeavor involves some form of gement, the manner in which management has been performed has really only been a topic rious study in the twentieth century. The study of educational management is even less well oped, and much management theory in education has been the product of only the recent

decades. From the early studies of Frederick Taylor to the modern mathematicians who see nagement primarily as an exercise in logical relationships, the study of management has been volutionary process.

The increased complexity of human life and the concomitant demand for greater managerial ertise has lead to the development of a number of theories of management. Koontz (1961), hfield (1966), March and Simon (1958), Barnard (1958), and Dale (1953), have all been or contributors to the development of management theory. In order to facilitate an erstanding of the theory underlying management by objectives, it is important to review fly the evolution of the discipline of management before dealing with the specifics of nagement by objectives theory in Chapter II. The following discussion of the evolution of nagement theory must be qualified. The complexity of the management theories presented not be adequately discussed in an introductory chapter. The reader is urged to pursue the mmended references for in-depth presentations of divergent viewpoints which are only fly reviewed here. The authors also acknowledge the difficulty of presenting an overview of nagement theory. Not all readers will agree with the selection of theories presented, nor with selection of highlights from those theories that are selected. This, perhaps, only emphasizes confusion a d ambiguity that has marked the evolution of management theory.

Management study should begin with an appreciation of the early work of men such as ol, the universalist, and Taylor, the empiricist, who sought to draw useable management nciples from the study of the management process and its component functions. The work of se early practitioners provided a foundation for the science of management, including the case dy approach still in use today in graduate schools across the country. Unfortunately, many of se early studies attempted to develop universal principles which tended to overlook erences in the contexts in which the management process occurs, and differences in the nagerial requirements of varying levels of management within the same context. Other icisms of this early work (Koontz, 1961) lie in the tendency to overlook the contributions to nagement theory from other disciplines, and in the danger of relying excessively on historical formance as a guide to future behavior.

A second major building block in management theory is the human behavior school of nagement which focuses on the study of getting things done through people. The human avior school places a heavy emphasis on interpersonal relationships and social science earch. Much of the literature on motivation in management is a result of the work of human avior school theorists. Within the human behavior school itself, there are great variations in ory. The range of theory extends from those who see the human behavior school as a tool to p the manager perform a larger job, to those who see the psychological behavior of individuals encompassing the entire discipline of management. While the human behavior school is an portant part and contribution to management theory, it is not sufficient by itself to serve as a nework for a total management process.

A third approach to management theory is the social systems school of management, closely entified with the work of Barnard (1938) March, and Simon (1958). This approach to anagement is heavily sociological in both method and content. One of the chief theoretical sks of this school of thought is to identify the nature of the cultural relationships of various cial groups and attempt to show these as a related and integrated system. This school has made merous contributions to management theory, including the recognition of organization as a cial unit subject to all the pressures and conflicts of the environment, a focus on awareness of e institutional foundations of organizational authority, the nature and influence of informal ganization, and the influence of social factors in the management process (Koontz, 1961).

A final general approach to management theory has been the work of the systems analysts, e economists, and the mathematicians, sometimes termed, the scientific school of management. he emphasis in this theoretical orientation is on concepts such as economic models, marginal tility, communication networks, and mathematical models for decision making. Unfortunately, e jargon, the complexity and cumbersomeness of many of these approaches to management has used many managers to ignore these approaches as, in many cases, theory devoid of practical alue.

The differing schools of management thought all tend to suffer from a common weakness. hile each school deals with special aspects of management, such as human relations, or efficient rganization, no individual school presents a satisfactory total framework and methodology for e management process. In essence, the parts do not always add up to a coherent whole in a ngle school of management.

Given the pressing demands of the public for accountability and cost effectiveness on one de, and the equally great demands from many students and faculty for more relevant education n the other side, new theories of educational management must take into account both the umanness and desire for participation by faculty and students, and the equally vital ccountability demands of the general public and legislative bodies. To reconcile the participative ovement in decision making, which developed in the 1960's with the accountability movement f the 1970's, will be one of the great challenges to community college management in the next ew years. This reconciliation will not be an easy task. As a recent report stated: "The history of ducation, the nature of the authority system, and the special context of education may make chool systems ideally resistant to change (Operation P.E.P., 1968)."

## ducation Management vs. Business Management – The Importance of the Context

Even if the discipline of management is mastered, an important part of the effectiveness of anagement is an appreciation of the context in which the management process must occur. orson (1960) defined a context as: "Formed by the function or purposes, the participants, the esources, the structure, i.e., the *parts* (schools, colleges, and departments), and the external

ips that create, influence, or support the institution." Differing kinds of contexts will require lifications of the management process. The context of education is vastly different from the ld of business where much theory and management practice developed. The special racteristics of the community college often make the manner in which a community college sident achieves objectives much different from the way in which an executive in business or ernment might proceed.

The effective education manager should understand the discipline and theory of nagement, and should study the business world for important insights into effective nagement practices. However, the application of management theory to the world of cation must take cognizance of the special context of education, and more specifically, the cial context of the community college. Business management practices cannot be imposed on academic community. The products of the two contexts are different. The product of the iness context is tangible and can usually be stated in specific terms of return on investment valued by price for which it sells on the market. The product of the educational context is tangible and more diverse, that is, there are multi-products to be achieved. In the business ld there is great control over the production process – over raw materials, input, quality trol and uniformity of final product. In education, the raw materials, the students, come to institution with great diversity in background, ability, and readiness for college (Trent and lsker 1967), (McConnell and Heist 1962). The tradition of academic freedom and the nature education make faculty less subject to control than their production level counterparts in the iness world, and the special interests, background, and training of a diverse faculty make form control impossible (even if it were desirable – which it most emphatically is not) in an demic community. Clearly, a large part of the life of an academic community lies in the ersity of viewpoints and approaches and in the intellectual tension generated through ersity.

The nature of authority also differs – with the business organization generally governed by ureaucratic hierarchy, and the educational organization geared more toward a combination of collegial and bureaucratic-participative kinds of authority. Finally, the most importantly, the kinds of social institutions exist for different purposes. As a recent report stated: "Business ts to provide primarily the material benefits desired by society, the goods and services essary and useful to citizens in order to meet their needs and pleasures in shelter, food, hing, recreation, and other items. Business operates in a market place, and must obtain nues in excess of costs in order to survive. Higher education exists to provide primarily the llectual and cultural benefits desired by society, the heritage of knowledge, values, and tive artistic expression conserved from the past and projected into the future. Higher cation operates in the context of social expectations, with income provided both by vidual consumers and by the social instruments of philanthropy and government. Because the s of the two institutions are different, because the objectives are different, and because the ncing is different, the methods of management must also reflect these differences (Academy Educational Development, 1972, Pg. 1).

## Community College Context

An understanding of the specific community college context is a second prerequisite for ctive community college management, for it is the special nature of this context which forces lification of business management theory. Community colleges are a uniquely American ntion. The community colleges differ not only from the world of business, but also from :r educational institutions engaged in higher education. The following research description of mmunity colleges in America is intended as general orientation material about the community ege context: The effective educational manager must be sensitive to this unique context – to history, the objectives, the values and the special needs, interests, and abilities of all who t function together in the community college. As Corson writes: *"Administrative practice procedure must be designed in full recognition of the context. Administrative absurdity eases directly with the square of the distance between context and process."*

Any discussion of the community college context must begin with a brief overview of the orical and philosophical basis of the community junior college movement in America. rnton (1960) describes the community college evolution in three major stages. Between 1850 1920 the idea and the actual implementation of the community college developed. While re is disagreement over where and when the first junior college began, (private junior colleges reported as early as 1852), at the beginning of the twentieth century there were no public -year junior colleges in existence. Yet, the idea behind the junior college had been under cussion by men such as Henry Tappan, William Rainey Harper, and David Star Jordan. It was liam Rainey Harper who divided the University of Chicago into junior and senior colleges in late 1890's, and Harper is also credited with playing a leading role in the establishment of t public junior colleges in Illinois. A second stage in the historical development of the mmunity college is what O'Bannion has termed the rise of "terminal" education which urred between World War I and World War II. While it was university leaders who provided the ial impetus for the idea of the junior college, it was a group of secondary educators, such as os and Eells and Campbell, who took the leadership in the 1920's and 1930's, in refining the ior college idea (O'Bannion, 1972, Pg. 5). While early proponents of the junior college idea transfer education as the primary purpose, these new leaders accepted the important role of minal education – the proper preparation for the junior college student emerging into the rld of work and the role of the citizen. Terminal education began to take on a dual role – on one hand vocational preparation of students for semiprofessional positions, and on the other d terminal education for citizens to obtain the training to help make a better class of zenry in America. By 1921, there were 70 public and 137 private junior colleges in America; by 1940, public junior colleges increased in number to 258; and private junior colleges mbered 317 (although private colleges enrolled less than 1/3 of the students) (Eells, 1940).

After 1940, there were two major thrusts in community college development. Thornton 60) identifies one as the development of adult education and community service programs

which developed during war time and continued to become major community college functions. While O'Bannion (1972) identifies the other major thrust as the search for general education which took place between the end of World War II and the sputnik era. General education became a main theme of this era primarily because of the famous Harvard report, and because a major effort toward defining and developing a general education was sponsored by the Carnegie Foundation for the advancement of teaching. A continued theme between 1945 and the sputnik era was growth. By 1955, nearly 700,000 students attended 581 public and private two-year colleges (Hillway, 1958), and by 1957, over 400,000 students were enrolled in special or adult classes. A final stage of development identified by O'Bannion (1972) is the commitment to comprehensiveness which is the primary theme of the community college today. The close community relationship part of community colleges had been a theme for decades, but after 1960, more and more community junior college leaders began to emphasize a variety of programs to meet all sorts of needs including vocational education, general education, adult education, remedial education, career education, community service programs, and guidance for community college students. While many of these functions had been ongoing since the early days of the community college, they were never before so consistently and thoroughly meshed into a single concept as with the development of the comprehensive community college. In summing up the development of the community college concept, Medsker (1960) has described the community college as a result of the social and economic forces which created it, including the following: (1) belief that educational opportunity beyond the high school must be equalized; (2) a need to develop the talents of our students as resources; (3) the need to help provide social mobility; (4) the need for an opportunity college which is low cost, easy admission, with the predominance of students probably from the working class; and (5) the need for adult education.

The product of the historical development of the community college is a uniquely American educational institution. Its major characteristics include its democracy – through its low cost, accessibility, and minimal admissions standards; its comprehensiveness in the range of programs offered and the variety of services performed; its high regard for the student through its emphasis on quality teaching as the primary function; and its unique community position as a local institution serving the local community.

In characterizing community junior colleges nationally, in 1972, over 2,600,000 students were attending community junior colleges in the United States. Two hallmarks of the community college have been growth and diversity. Community junior colleges increased in number from a few scattered colleges in 1900 to 258 in 1940. By 1955, there were 581 public and private two-year colleges, and today there are over 1,100 community colleges in America.

Thus, a number of authors writing about the development of the community junior college tend to agree on the development of its historical stages, the rise of its philosophy, its purposes, and its functions. An understanding of this background context is an important prerequisite for managerial effectiveness in the community junior college setting.

## College Constituencies

A second necessary area of understanding in addition to the historical and philosophical development of the community junior college is the appreciation of the differing college constituencies and the characteristics of those within the constituencies. Of course, each college is unique. Our purpose here is to present a brief research overview to give the reader a feel for some general research findings about community college students and staff. It is for and through these constituencies that the management process will succeed or fail. An understanding of the hopes, needs, abilities, and ideas of constituencies on the local campus must be a top priority for the effective educational manager.

Students in community colleges have been the subject of a number of studies. Medsker (1960), Cross (1968), Trent and Medsker (1967), and Medsker and Tillery (1971). General findings tend to be stated as follows: in terms of socioeconomic background, studies find that while there is great diversity among students in community colleges, and while there is much overlap with senior institutions, larger percentages of students in community colleges come from family backgrounds of lower educational and socioeconomic status. In terms of skill levels on tests of academic aptitude and ability, researchers generally agree that community college students compared to their counterparts in four-year colleges and universities score lower on current measures of academic ability. However, a number of researchers suggest caution interpreting the scores. On all variables, there is great overlap in student characteristics between two-year and four-year institutions, also, as Cross writes: *"Present tests are on the whole effective measures of success in the traditional curriculum and it comes as no surprise that the student oriented toward traditional education scores higher on the tests oriented in the same direction. Very little is known about the matter of special abilities and aptitudes of the junior college student new to the ranks of higher education* (Cross, 1968)." Again, as with socioeconomic level, the average score tends to conceal a wide range of abilities and significant overlap with the senior institutions.

In terms of personality characteristics, in general, junior college students tend to be more conventional, less independent, less attracted to reflective thought, and less tolerant than their peers in four-year institutions. However, a major qualifier to this analysis is pointed out by O'Bannion (1972) when he writes that these data are based mostly upon data for regular day-time students, thus, neglecting the considerable student population over 22 years of ages and, perhaps, enrolled in either a part-time basis or in adult programs. Findings from Project Scope (1969) suggest that many junior college youths are unsure of abilities. Compared to students in four-year colleges, community college students have only modest success in high school, less than satisfying guidance experiences and continuing doubts about their ability to do college work.

Junior college students also tend to have lower educational and occupational aspirations than students in four-year colleges, and they report eagerness for guidance and counseling help. In terms of goals, junior college students are likely to be attracted to the college for practical

easons such as closeness to home, low cost and job training. As Cross (1968, Pg. 50) writes: *'They do not seek an intellectual atmosphere nor do they find it.'*

A variety of factors relate to possible differences in motivation between students in two- nd four-year colleges. Studies by Astin (1967) show that junior college freshmen are less onfident than four-year college and university freshmen on academic, leadership, mathematical, nd writing ability traits as well as on drive to achieve and intellectual self-confidence.

Thus, while there is great diversity in student background and ability, a large number of ommunity college students need special help. Many of them are older students with family bligations, a large percentage of them need special or remedial help with their education, and pecial counseling to meet the challenges of the college experience or the open door becomes nerely another door to failure in our education network.

Faculty in community colleges have also been described in a number of studies. Medsker nd Tillery (1971), in a representative study of 57 community colleges throughout the country, eported that their findings tended to confirm findings from a number of previous studies. The indings included:

- In terms of age, the vast majority of faculty are in the 31 to 50 year-old range, with less than 18 per cent under 30 and only 23 per cent over 50.

- Approximately 78 per cent of the sample held masters degrees, 9 per cent held doctorates, 10 per cent held bachelor's degrees, and 3 per cent had less education than a bachelor's degree.

- Faculty came to the community college from a number of backgrounds. About 33 per cent of the faculty surveyed came from the public high school system, about 22 per cent came from graduate school, about 10 per cent came from business or industry, and about 11 per cent came from four-year institutions.

A number of research studies, Medsker (1960), Leslie (1971), Bushnell (1973) tend to confirm the observation that a significant number of faculty members identify more closely with he faculties of four-year institutions than they do with their own faculty. Faculty goal ambivalence can be a significant barrier to the fulfillment of the goals of the community college. Areas of faculty goal ambivalence concern include the educational standards, the open-door concept, and the community college philosophy of comprehensiveness in education. Other major community college faculty concerns include the issues of collective bargaining, staff development – both pre-service and in-service – changes in tenure procedures, and the implications of the "accountability movement" for the evaluation of teaching and educational effectiveness. Obviously, faculty needs, interests and problems will play a significant role in moulding the educational context in which the management process must occur. An understanding of those

eeds, interests and problems is an important part of the management process.

In researching trustee characteristics, the authors found that governing boards of colleges nd universities derive their authority from the law, and legally, the full and final control for an stitution lies with the board. As Hartnett writes: *"Given these circumstances, it is remarkable hat so little is known about who trustees are, what they do in their roles as trustees, and how hey feel about current issues in American higher education* (1969)."

Aside from some regional studies, the empirical research on trustees is quite limited. Studies y Beck (1970), Perkins (1966), Rauth (1970) and Hartnett (1969) appear to constitute much of he empirical literature on trustees. Unlike the student segment, the community college trustee is ore homogeneous in terms of general descriptions, although this stereotype is changing. lartnett (1969) found that, in general, community college trustees could be described as ollows*:

- 85 per cent of the public two-year college trustees were male, 14 per cent were female.

- 12 per cent of the public two-year college trustees were 39 or under, 62 per cent were between 40 and 59, and 26 per cent were 60 or over.

- 95 per cent of the trustees were caucasion, 2 per cent were negro. In terms of education, 7 per cent of the sample had a high school degree or less education than a high school degree, 59 per cent had at least some college, including 26 per cent with a bachelor's degree and 10 per cent with some graduate school, and 31 per cent had either a master's degree, a three-year professional degree, or a doctorate.

- The sample was largely protestant (77 per cent) and high income (70 per cent of the sample reported incomes over $15,000 per year).

- A substantial portion of the sample were new trustees – 46 per cent reported less than three years membership on the board.

- In terms of attitudes about education, 68 per cent of the sample viewed education as a privilege rather than a right, 61 per cent agreed or strongly agreed with the statement that there should be no collective bargaining with faculty, 65 per cent supported the right of faculty to express opinions about any issue in any of the various channels of college communication without fear of reprisal, and 76 per cent felt that all speakers should be subject to some official screening process. Eighty-six per cent of the sample felt that students who actively disrupt the functioning of the college by demonstrating should be expelled or suspended, and 61 per cent agreed that the institution should be actively involved in solving social problems. *"In terms of relationship with the president, only 9 per cent agreed that the role of the president should be as a mediator*

*Based on survey returns of 67 two-year public colleges and 45 private two-year colleges.

*rather than a leader. Trustees regard the most important characteristics in the choice of a president as previous administrative experience (96 per cent), polished style (88 per cent), and faculty experience (87 per cent)."*

In terms of familiarity with the literature of higher education, between 50 and 60 per cent of the sample reported never hearing of a list of 15 major books about higher education, and very few trustees (3 - 12 per cent) reported reading any journals on a list of 11 leading periodicals. (The major exception was the junior college journal – read by 56 per cent of the trustees in the sample.)

To summarize, there is a need for periodic studies of background, preparation, needs, and interests of community college trustees. The authors suspect that significant changes have already occurred in many characteristics of community college trustees since the Hartnett study (1969). Additional research about perceived needs of trustees would be especially helpful for purposes of improving orientation, information, and managerial expertise of community college trustees. Again, as with all general research descriptions, the data show great diversity and are useful only in helping orient the reader about a general context of the community college. A knowledge of the philosophy, values, abilities, attitudes, needs, and interests of those individuals who must function together in the community college educational process is imperative if the educational manager is to be effective in performing his tasks.

Leadership

The question of educational and managerial leadership has long been a topic of debate (Cohen and Roueche, 1969), (Kerr, 1963). The how and why of educational leadership will vary with the unique context of each institution. The necessity of educational leadership was well stated by Cohen and Roueche (1969, Pg. 12) who wrote: *"The junior college has been charged with unique tasks – e.g., designing instructional forms suitable to a wide range of students, and being responsible for the entire community's educational needs. It is supposed to be a teaching institution; accordingly, it cannot function well by perpetuating forms developed by and for types of schools in which student learning is a consideration secondary to research or to wholesale socialization. The fulfillment of a unique mission demands unique forms. Leaders, not administrators, can create them."*

Among major issues facing administrators in community colleges are the problems presented by the demands for changes from authoritarian governance to more democratic governance procedures; the difficulties of trying to maintain educational standards, provide an open door to all students, and be responsive to community needs; the challenges presented by the previously mentioned issues of collective bargaining, tenure, staff development and the accountability movement; the problems of trying to educate a group of college students, many of whom are clearly non-traditional in their abilities, needs, interests, and values; and the ever-present

oblems of adequate finance.

Thus, the community college has its own unique context different from the business world d different from the four-year colleges. The context is a product of the history, the objectives, e values, the staff and student characteristics, and the community in which the college resides. dividual community colleges also differ enormously in context – from the urban college to the ral college, from the highly transfer oriented to the highly vocationally oriented. A context nsists of more than research characterizations of those who are physically present on the mpus. The college exists in a community which has a special environment, including unique oblems and issues which differ from college to college. An important part of any management eparation should be the study of the special context of the college, for it is in the combination understanding the management options available, and the application of those options to meet e specific context of a unique community college that the art of effective management is und.

ummary

A number of problems have led to the "accountability movement" in education. The forces the movement for increased participation in governance by faculty and students which curred in the late 1960's, coupled with the demands by state legislatures and the public for ore accountability in the 1970's, present serious challenges to community college management. wo prerequisites for more effective community college management are an understanding that ere is discipline of management with a set of skills and standards,and an understanding of the ecial context of the community college where the management process must occur. These erequisites were discussed in this chapter to help set the stage for the presentation of a general eory of management by objectives which will be discussed in Chapter II.

## CHAPTER II

## A THEORETICAL FRAMEWORK FOR MANAGEMENT BY OBJECTIVES

Chapter I reviewed a number of current problems of education in America today. In reviewing those problems, it is apparent that community colleges especially are faced with a double dilemma: community colleges must develop more effective management tools for better educational accountability and, yet, the management tools must take into account the unique participatory context of education where authority, objectives and values differ from the business world. As indicated in Chapter I, it would be a mistake to try to superimpose strict business management practices on the community college context. Yet, much effective management theory is a product of the business world, and it is increasingly apparent that more effective models of management and more effective educational programs are clear priorities of both the general public and legislatures which are allocating dollars for education.

Management by objectives is one management model currently being proposed as an answer to some of the management and accountability problems facing community colleges. It is the primary purpose of Chapter II to present a general theory of management by objectives. Beginning with the definition of management by objectives and a basic working vocabulary to assist readers through the semantic woods which often overwhelms management theory, Chapter II will then discuss a general theoretical outline of management by objectives and the major steps in the implementation of this particular approach to community college management. A discussion of the major advantages of management by objectives for both institutions and constituencies and a discussion of some of the disadvantages and dangers of the management by objectives approach will also be presented in this chapter to help set the stage for an in-depth discussion of needs assessment, varying approaches to institutional management by objectives programs, and budget and fiscal planning which will follow in subsequent chapters.

Management by Objectives – Fad or Fundamental Change? A review of the history of education in the twentieth century reveals a number of differing fads, movements, and innovations. Some of these movements have had great impact on educational theory and practice, while others temporarily caused a stir, perhaps disrupted, and then quietly died away, making little or no impact. The combination of the participatory forces of the 1960's and the accountability movement of the 1970's has produced major educational management problems. Many differing solutions for these management problems are being proposed, and serious questions arise about which proposals will become fads and which will lead to fundamental change. Throughout history, even the use of the term "management" has presented problems in the world of education. As discussed in Chapter I, the study of educational management is a very new discipline. Despite resistance, management has to be a function at all levels. If we accept the commonly identified functions of management as including planning, organizing, communicating,

motivating and evaluating, it is apparent that all segments involved in community college education must perform these functions. It is debatable, at present, whether or not all of these functions are currently being performed on a systematic and regular basis. Certainly, the management roles and requirements of trustees and administrators are apparent – often prescribed in law. Faculty also have management roles – both institutionwide and in their courses. They must plan their courses, must organize and coordinate educational programs, must be effective in communicating with and motivating students, and must both evaluate students and be evaluated for their own effectiveness in their educational mission.

It is imperative that the fundamental functions of management be systematically built into community college management practices and not left to chance or accident. However, community college management must also take into account the special context where community college education takes place. The justification for presenting the management by objectives theory as applied to community college education is only secondarily a justification based on efficiency and managerial competence. The primary justification of management by objectives in community college education is, as will be discussed, an educational justification – in its contribution to educational programming, in its contribution to educational planning, coordination, and evaluation, and in its contribution to student learning. It is important to stress this point at the outset of this chapter because there is much confusion and hostility to management by objectives.

A number of very strong pro and con positions on management by objectives are emerging in the literature and in presentations at national conferences around the country. Unfortunately, much of the debate over management by objectives involves emotions or generalities, often with little precise information on just what management by objectives can or cannot do. Therefore, before discussing the theory and the process of implementation of management by objectives, it is important to clarify a number of terms and definitions. Terms and definitions are usually reserved for an appropriate appendix. They are included in this chapter because it is crucial for the reader to be able to understand precisely what the terms mean in management by objectives theory. If this volume is to have utility for the reader, a clear and precise understanding of terms is imperative. Difficult questions will be asked of proponents of management by objectives. Without an understanding of the precise terms involved, discussions can often degenerate very quickly into confusion and emotional pro and con argument over language. The importance of understanding terms and language was, perhaps, best stated by Lavoisier, a Chemistry professor writing in 1789: "*As ideas are preserved and communicated by means of words, it necessarily follows that we cannot improve the language of any science without, at the same time, improving the science itself; neither can we, on the other hand, improve a science without improving the language or nomenclature which belongs to it. However certain the facts of any science may be, and however just the ideas we may have formed of these facts, we can only communicate false impressions to others while we want words by which these may be properly expressed* (Simon,

966, Pg. 23)." In this spirit, we begin our discussion of management by objectives with a review f the major terms involved in management by objectives theory.

1. Management by Objectives – Management by objectives is best defined operationally. It a process which provides both the framework and a methodology for systematically performing ne basic functions of management – planning, organizing, communicating, motivating and valuating. Management by objectives, in an educational setting, begins with the assessment of ne needs for education in the community. Based on needs, a philosophy or mission statement is eveloped, an inventory of resources is conducted, and a plan for implementation of a anagement program is drawn up. Clearly stated institutional objectives are then developed. For ach institutional objective, sets of program objectives are then developed which include course bjectives and support functions. Provision is made for periodic review throughout the year, and or systematic evaluation of the extent of achievement of objectives at the end of the year. A nal part of the management by objectives process involves feedback to the individuals and rogram managers involved in the achievement of objectives, and systematic revision, eadjustment and reassessment of needs on a yearly basis.

2. Needs Assessment – A needs assessment is a compiled list of projections, studies and erceptions solicited from a number of differing sources, including community representatives, taff and students. The needs assessment measures the degree of satisfaction with presently xisting programs and provides opportunity to express desires for changes, modifications or new rograms. Included in the needs assessment is an evaluation of facilities, programs, special ervices, materials, community needs, staff needs, student needs and other significant educational rogram needs.

3. Mission Statement – This is a composite statement of the beliefs about the basic college urposes based upon those aspects of learning which the college should consider as opposed to reas of concern of other institutions such as the church or the family, and which specifically tates the educational mission of the college.

4. Objective – An objective is an aimed-for future accomplishment that predicts the benefits hat will result from planned activities, and which, if attained, advances the system toward the ccepted educational mission. Objectives fall into two primary categories:

a. Measurable – A measurable objective is a statement describing in specifically measurable terms what outcomes are expected to be achieved as a result of a particular educational program or task. Measurable objectives can be verified within a given time period under specifiable conditions.

b. Currently Unmeasurable – A currently unmeasurable objective is an aimed-for future

accomplishment that cannot be verified within the current reporting period, but for which a number of steps progressing toward the objective can be listed.

5. Constraints – Constraints are of two kinds:

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a. Irreducible Constraints – Those obstacles to college activities which are judged to be beyond the control of immediately responsible educators and which are not controllable by anyone in the college district within the time span of the program being evaluated.

b. Reducible Constraints – Those obstacles to the college activities which are judged to be within the control of the immediately responsible educators and which can be reduced or eliminated within the time span of the evaluation period.

6. Accountability – Accountability is the ability to demonstrate both the efficient use of urces and the educational effectiveness of meeting agreed-upon institutional objectives when g (1) verified objectives, (2) when serving well-identified students, and (3) when taking into ount constraints relative to the school, community and individual setting of the institution.

7. Institutional Objectives – Institutional objectives are broad college outcomes which are cribed in measurable or currently unmeasurable terms and which involve the contributions of mber of programs through the achievement of a number of related objectives.

8. A Program – A program is a series of interdependent, closely related services and vities which contribute to a common institutional objective.

9. Program Objectives – Program objectives are broad, long-term predicted outcomes of a e of improved competency for the constituents of a given program. Program objectives are lly stated in terms of a significant number of students with time and cost constraints and urce inputs indicated.

10. Course Objectives – Course objectives are statements of aimed-for accomplishments and cational experiences that the student will be provided as part of an educational course. Course ctives are planning tools and guides, as opposed to behavioral objectives which imply a more form response or action by students.

As indicated at the beginning of the chapter, an understanding of the above defined terms is cial before discussing management by objectives theory. Much of the confusion and rization about management by objectives is often over lack of understanding about the

ess or the language, not the substance of basic management by objectives programs. Let us e now from a discussion of definitions to a discussion of the general underlying theory of agement by objectives.

Management by Objectives – A Theoretical Framework – The basic theory of management objectives, like all management theory, is the product of an evolutionary process. In loping the presentation which follows, credit and acknowledgement should be given to the ks of Drucker (1958), Lahti (1971), Hitt (1973), Churchman (1968) and Johnson and 'sky (1973). Management by objectives is really a sequence of logical steps, a framework ch allows for differences in educational context, with each step growing out of the preceding and building for its success. While there is not complete agreement on the steps and iework of management by objectives, the authors submit that the following step-by-step ess covers the major tasks involved in implementing a management by objectives program:

1. Developing the Idea of Management by Objectives – Information and Orientation – ardless of where the initial impetus comes from, the commitment of trustees, administrators, faculty leaders must be secured if the management by objectives program is to even get off ground. The very first step in management by objectives must be to develop the idea of agement by objectives and communicate it to the top level decision makers on the campus. ough the use of literature, consultants and educators from institutions already using agement by objectives programs, an adequate orientation program can be provided for level leaders on the community college campus. In reviewing and developing the idea of agement by objectives, presenters should disucss both the advantages and the disadvantages he management by objectives program and should present a realistic and balanced perspective uding some of the problems and dangers as well as the benefits.

Before embarking on management by objectives, educators must know the cost and the time mitment involved and should not raise false hopes for an easy panacea for very complex blems. Care must be taken to educate community and campus people that this process takes a t deal of time – not only during the initial stage of developing the program, but over, haps, a three-to five-year period before an acceptable program of management by objectives is pleted. By the very nature of management by objectives, it is never really completed use, through constant evaluation and revision, change is systematically built into the process.

Once top level management, trustee and faculty leaders have been provided orientation, a or step has been taken; but care must also be taken to inform and orient both the staff and community, including students and classified staff. As the idea of management by objectives onsidered, there must be accurate information provided by campus leaders, because there will

ays be a certain amount of confusion, fear and hostility that can kill a management by ectives program in the first year. Developing the idea of management by objectives through ervice staff development programs of information and orientation will not convince everyone, it will help set the stage for a participatory model of management and it will help head off ne problems and fears that could arise and destroy the program at the very beginning.

2. Development of a Plan for the Management by Objectives Program – An activity which go on concurrently with the development of the idea of management by objectives is the task planning. As Tilles writes: *"No seasoned politician would undertake a campaign for major ice without a clear concept of his strategy; no good business would commit resources and llars for a program unless they had some idea of the outcome* (1966, Pg. 55)." Unfortunately, en in education we embark on programs where outcomes are very unclear or plans are at best peful. It is crucial that a complete plan for the implementation of management by objectives developed before any attempts are made to implement it. Included in the plan should be visions for orientation, for education and staff training, for staff, community, and student olvement, for a calendar of events, and for the specification of the steps at each point in the plementation process and of each task which has to be accomplished at each major step. Unless s is done, the management by objectives process can quickly degenerate into confusion and ntradictory cross-purpose work. Even if the implementation of management by objectives has be delayed, it is worth it to insure that once the program begins it will have a reasonable ance of success. A hasty and ill-thought out plan for management by objectives is almost surely omed to failure.

3. Training of Staff – The third step which should occur prior to beginning a management objectives program is the training of the staff to participate effectively in the program. nagement by objectives requires time, commitment, and the ability to deal with the kinds of ms and language involved (thus the utility of definitions). The staff must be educated to write jectives and to state work tasks and educational objectives in appropriate language. Faculty d administrators must be familiar with concepts such as objectives, both measurable and neasurable, constraints, levels of performance, and the other kinds of considerations which go o developing an effective and useable management by objectives program. Staff must also be ined to write objectives based on the educational mission of the institution, and not on trivial, antitative objectives which are both easily measured and easily attained. Staff work must also coordinated so that objectives blend into an institutional whole rather than a series of related parts. The end product of the planning, orientation and training processes should be development of a plan for a total educational management program. Thus, if the idea of nagement by objectives is developed, and if orientation is provided, and if a well-thought out n is conceived and specified, and if the staff is trained to the tasks and skills necessary to plement management by objectives, only then should the management by objectives program tually be implemented.

4. Needs Assessment – The needs assessment has been defined simply as a difference tween what is and what is desired. It is important to insure that in conducting a needs essment, care is taken to balance the perspectives and perceptions solicited. It is very easy to l into the trap of focusing only on problems or on unrealistic programs that are desired but are t feasible. The college needs to assess the programs that are successful as well as those that fail. put should be obtained from many sources including perceptions from the educational mmunity and students as well as the staff. As Johnson writes: *"The needs and desires of an ucational system are a reflection of the overall needs and desires of society – philosophical, onomic, social, political and individual. They can only be known by persons or groups who present each and all of these segments of society* (Johnson and Grafsky, Pg. 14)." Needs sessment has been the subject of much recent literature and will be discussed in detail in apter III. Techniques for assessing needs vary from the use of printed needs and objectives tements drawn from national objective banks, to extensive meetings of the community and ff representatives in small groups, to the use of anonymous needs assessment techniques and jectives-development instruments such as the Delphi technique. Regardless of the technique plied, the key to a successful needs assessment lies in the care taken to balance the kinds of estions asked and to insure that the information gathered by the needs assessment process if as presentative and as unbiased as possible. A useful needs assessment will include information on e success and the weaknesses of current programs, ideas for needed changes, suggestions for w and innovative programs and for the elimination of old or unsuccessful programs. However, e end product will only be as good as the care and planning taken to insure a successful and lanced objective needs assessment. Once the needs assessment is completed, there should be a port available that outlines the findings of the needs assessment and there should be portunity for final review by students, faculty, community representatives and staff before the al needs assessment is presented to the board of trustees for approval and adoption.

5. The Development of the Mission Statement – The mission statement is a declaration of e broad educational philosophy of the institution and it is from the mission statement that the jectives of an educational system are derived. The mission statement should reflect those itudes and beliefs about education which make the college a unique educational environment. e statement should be idealistic in the sense that it is a philosophical and broad general tement of beliefs, but it also should reflect a realistic consideration of the resources, the ntext, the community, the history and the staff of the college which is charged to fulfill the ucational mission.

6. Resource Analysis – Educational resources are those assets which contribute to the hievement of objectives. Resources include money, people, physical facilities, community cilities, staff and time. A critical part of the management by objectives programs is the

levelopment of a thorough inventory of the kinds of resources available for the college to use in chieving its educational mission. It is important that this activity take place before objectives are et because, without this kind of analysis, unrealistic objectives can be set which will quickly kill program or will lead to severe morale problems by setting unrealistic standards and not roviding the resources to meet those standards. A key concept (which will be discussed in depth n later chapters) is the concept of constraints in the educational process. Educators must be ware of the kinds of constraints that they will encounter as they set objectives. Without this ind of awareness, which is developed through resource analysis, objectives may be unrealistic nd almost totally useless as management guidance tools. Once an inventory of resources has een made, useful data will be available that can be used to predict differing outcomes by varying he amount of resources available to achieve objectives.

7. The Establishment of Institutional Objectives – Institutional objectives are broad statements of aimed-for future accomplishments that specify the outcomes of the institution's educational program efforts. there has been some confusion over the terms "goals and objectives." The authors have concluded that the terms "goals and unmeasurable objectives" are too similar to warrant an arbitrary division of activities. Instead, the terms "institutional objectives," "program objectives," and "course objectives" are suggested as more useful for planning purposes and less confusing to staff. The process of further dividing objectives into measurable and unmeasurable categories eliminates the need for the classification of "goals," which are usually employed to differentiate between general and specific outcomes.

"Institutional objectives" are established via a process of staff interaction and participation. Using the needs assessment, resource analysis and mission statement as guidelines, broad statements of objectives for the institution as a whole are developed. The statements cut across programs and activities and apply to the total institution, as opposed to program or course objectives which are more specific. Growing out of the institutional objectives are the program objectives which are key building blocks in the management by objectives process.

8. The Development of Program Objectives – After institutional objectives have been established, the process of staff interaction is repeated by program level to derive program objectives – both measurable and unmeasurable – which will form the heart of the management by objectives accountability mechanism. Thus, for each institutional objective that is developed for the institution, a number of program objectives must be developed which, when put together, will move the institution toward the attainment of given institutional objectives for differing functions of the college. As an example, the broad category of INSTRUCTION might have program objectives for each division or each department, depending on the desires and organizational pattern of the institution. The service function of LIBRARY, as another example, can have a series of program objectives which are both measurable and currently unmeasurable,

hich in their accomplishment contribute to the institution's objectives. There is much debate er program objectives and, as indicated at the beginning of the chapter, much of the debate volves definitions and terminology. An argument against the development of institutional ogram objectives generally goes as follows: "The most important educational benefits are nerally timeless and unmeasurable so why bother writing objectives. To do so will put a emium on the trivial, the quantitative and the easily measurable." To counter these arguments, ere is a need for precise definitions, clear information and a clarification of the steps that show w objectives are developed, how they are stated and how they contribute to the effectiveness the educational program. There are a number of problems which must be faced in the velopment of institutional objectives including the following:

a. There is a need for a clarification of the difference between measurable objectives and rrently unmeasurable objectives. Both these terms have been defined at the beginning of the apter, but currently unmeasurable objectives should be discussed in more detail at this point. rrently unmeasurable objectives are aimed-for future accomplishments that cannot be verified thin the current reporting period. Unlike measurable objectives, which can be precisely aluated within the time period of the management program, the currently unmeasurable jectives leave the evaluator with the dilemma of having to provide some sort of evaluation for objective which is not completely measurable within the given time period. The best way out this dilemma is to describe the currently unmeasurable objective operationally, that is, to state e objective, and then state the series of steps which contribute to its attainment. A currently measurable objective might be something like: "Each graduate will understand and appreciate s biological and physical environment and realize its fragile nature. His understanding will lead m to use his environment in a judicious manner and to preserve it for use by future nerations." While this objective cannot be measured within the time frame of a semester or a ar, a series of steps which will help graduates to understand their environment and to protect it n be stated. At the end of the current reporting period, the series of steps, including courses, mmunity programs and individual experiences that the student will have undergone which will d him to his ultimate objective can be specified. At the end of the evaluation period we can te in precise terms the series of steps the student has progressed through in movement toward at currently unmeasurable objective. Educators interested in management by objectives should derstand the definitions and the steps involved in working with currently unmeasurable jectives because this issue will be one of the very first issues raised when the idea of anagement by objectives is proposed, especially in the area of the liberal arts which involves a eater number of currently unmeasurable objectives than areas such as technical education

b. A second kind of problem which must be faced when developing institutional program jectives involves the development of skills in writing the objectives themselves. Objectives ould contain three kinds of information: (1) the outcome to be expected, (2) the level of

hiévement – in other words – the standards or criteria against which the outcome will be easured, and (3) the conditions of an evaluation, conditions being those conditions which ould be held constant when determining the extent to which the objective has been achieved. nditions include environmental factors, special equipment, written, oral, or demonstrated nditions and both individual and group conditions. It is important when considering conditions take into account both reducible and irreducible constraints, and the kinds of resources ailable such as dollars, people, time, and certain student and staff abilities and liabilities, which ould have been uncovered through resource analysis. A solid staff development program should prepared to assist the staff to acquire the skills needed to write useable objectives.

c. A third problem is the consideration of alternatives and the analysis of the mix of jectives achievable for differing resource allocations. Sets of objectives need to be related to e resource inventory to demonstrate how different investments will produce different tcomes. Budgets should reflect programs at various levels and should not simply be line items. or years, the educational community has based most of its reports to those who determine the nancial resources to be spent on education on input factors, that is, factors which measure the sources going into the educational process. As McPherran writes: *"Institutions can tell you to e penny how much they spent last year for faculty salaries, utilities and wax for the gymnasium or. But they cannot tell you what this investment produced because our focus in educational counting has been on input, not output* (McPherran, 1971, Pg. 4)." The challenge of the 1970's to develop more precise measures of educational benefits which both the students and society e receiving for their investment in education. The management by objectives process allows the stitution to demonstrate the different kinds of objectives achievable at different resource input vels, the kinds of staff and resource mix needed to achieve differing kinds of objectives, and the nefits to the institution, to students and to society for differing dollar investments. The velopment of program objectives is the heart of the management by objectives program. These jectives must blend and add up to a coherent whole institution and not simply remain sets of lated and unrelated parts. The development of this process is a building effort which requires uch time, money, total commitment and the solution of a number of problems which have only en briefly outlined in this section. The end product of this process should be a clear definition what it is we are attempting to do as educators, how we plan to do it, with a built in aluation mechanism to tell us whether or not we succeeded.

9. The Development of Program Support Objectives – Just as program objectives grow out the institutional objectives and the mission statement of the college, program support jectives grow out of the program objectives. Program support objectives are the statements of tivities needed to implement programs. Thus, if an institutional program objective for general ucation is "that each graduate will demonstrate his understanding of, and appreciation for, the ture and development of our system of government," then the program support objectives are

ie administrative and classified staff duties, the support functions, the teaching functions and ie courses needed to attain that institutional objective. The process of developing support bjectives is similar to the development of institutional objectives – a give and take process mong staff, but with the direction and guidance provided by the institutional mission statement, ie institutional objectives, and the institutional program objectives. Institutional program bjectives and support objectives resemble a pyramid with the institutional mission statement nd philosophy at the apex, with the institutional objectives at the first level, with the program bjectives at the second level; supporting the entire system are the institutional program support bjectives, including teaching, staff, administrative and various support functions which are th eart of the entire management by objectives program. A critical and controversial kind of bjective developed at this level is the course objective. As some critics have stated, it is at the ourse level that management by objectives may break down. Critics often confuse course bjectives with behavioral objectives. The difference is significant. Behavioral objectives state ome kind of uniform behavior or task to be accomplished by students upon completion of the ourse. There is an implied rigidity and uniformity which raises fears in many faculty of nthinking or automatic responses by students which will be the product of the course.

Course objectives are quite different. Course objectives are statements of aimed-for ccomplishments – educational experiences – that the student will be provided as part of the ourse. Course objectives are planning devices for faculty and useful guides for students. While ourse objectives can be used as a basis of measurement, their primary utility is as a planning and anagement aid to help improve teaching and learning.

Course objectives are essential to the accomplishment of departmental objectives and ivisional objectives. Unless the staff sees the importance of preparing measurable and currently nmeasurable course objectives for the offerings of the institution, there can be no defensible ystem of management by objectives. Perhaps the guiding spirit of the development of course bjectives was best captured by Neblett and Pale (1969) who wrote, concerning the development f course objectives in Great Britain: *"One danger in objectives research lies in supposing that :tting the objectives for a particular course is an end in itself, and that once they are specified, ney may be used to prescribe totally the tasks and activities of students. The rationale behind odifying objectives is that it is a step on the way to improving all aspects of the teaching, arning process. The aim is to be more precise about what a college education achieves without esorting to wildly general statements concerning the characteristics of the educated man."*

10. Implementation and Review – If the detailed planning has been completed, the actual nplementation of management by objectives should be one of the easier tasks of the system. ach program, each division and each course should have objectives to guide where it is going and ow it is going to get there. It is imperative, especially when first implementing a management by

objectives program, to build into the program a mid-year review of objectives, progress and problems in moving toward the accomplishment of institutional objectives. Many objectives may be set too high or too low, especially in the first year. New constraints and problems not thought of in the original planning, changes in conditions, and personnel, and other kinds of problems may arise which makes a mid-year review imperative to allow time for change and adjustment. There is no sense in purusing a course of action which is destined to failure. A mid-year review allows for the identification of constraints and for changes and adjustments as needed.

11. Evaluation – Evaluation is an integral part of the management by objectives program and should take place on a yearly basis. As much as is humanly possible, the evaluation should be a nonthreatening, positive, improvement oriented professional action. The evaluation should not be an inquisition and it should not be a blame-oriented kind of process because the achievement of institutional objectives is a primary focus of evaluation. Achieving a positive and nonthreatening atmosphere is difficult, but critical. One way of achieving this is to evaluate programs in a number of ways. As Drucker writes: *"No one single objective is the objective of an organization; no single yard stick is the measure of performance, prospects and results* (1958, Pg. 5)." As stressed throughout this volume, the entire management by objectives process should be built slowly and carefully. The evaluation process should come from a number of perspectives including the following:

a. The attainment of objectives – the comparison of stated objectives with accomplishments, allowing for constraints.

b. The attainment of objectives at differing costs levels – planned costs vs. actual costs.

c. The educational audit which is the involvement of an outside educator who serves in much the same capacity as a fiscal auditor (this concept will be discussed in more detail in Chapter IV).

The end product of the evaluation process should be an accountability mechanism that demonstrates which objectives were achieved, which were not achieved, why those that were not achieved had problems, and suggestions for new directions and changes, which leads us to the final part of the management by objectives program.

12. Feedback and Readjustment – A weakness in many management programs is communication – both upward and downward. At the end of the evaluation, an institutional study report should be developed and provisions should be made for interaction of staff, both within programs and between programs so that problems, reactions to objectives, successes and suggestions can be communicated both within and among institutional program divisions. Too

often, plans break down due to lack of communication. It is important that effective communication be built into the process in a systematic and regular manner, and not left to chance. As stated earlier, it takes between three and five years to develop an adequate management by objectives program, and by the nature of the process, it is never fully completed. As one report recently stated: "Objectives, once decided on, are not likely to be good forever. There should be continuing dialogue about their validity, about the means necessary for their attainment and about the discipline they can impose on the institution's activities. Such study and debate should stimulate initiative and innovation throughout the college (Deegan, McConnell, Mortimer, Stull, 1970. Pg. 59)."

The above steps outline a general theory of the management by objectives process. It is a theory that builds in the major functions of management; provides for a humanistic participative process; and it holds the hope of reconciling both the demand for greater participation and the demand for greater accountability in community college education. Ultimately, the justification for management by objectives must lie in its effectiveness as an educational program, and not in its efficiency as a management approach. The ultimate beneficiaries of the program should be the students – through greater learning, through better organization and through more effective planning for educational outcomes. As indicated earlier, management by objectives has both proponents and opponents. Let us conclude this chapter with a discussion of both the advantages and the disadvantages of management by objectives.

Management by Objectives – The Advantages – There have been several papers by many authors indicating both advantages and disadvantages of management by objectives. In this final section, we will try to condense the writings of a number of people into a general discussion of both advantages and disadvantages of management by objectives. Among the major advantages of management by objectives are the following:

1. Management by Objectives as an Effective Planning Tool – Critics of education often criticize our educational system as one which is ideally resistent to change. The management by objectives process provides an effective planning tool that allows for both change and evaluation. It represents both a framework and a methodology for planning and change, and systematically incorporates the major functions of management. Through the needs assessment and objectives setting process, the fundamental purposes of the institution are evaluated and special needs which the college must meet can be brought to the surface. The translation of institutional objectives into measurable or currently unmeasurable program objective statements provides a framework for more effective planning, staff utilization, resource allocation and evaluation. The objective statements also allow the institution as a whole, and each segment within the institution, to learn about, participate in, and evaluate the college priorities and programs. The built-in evaluation process allows college, program and individual productivity to be assessed more systematically

than has often been the case in the past history of educational management.

2. Management by Objectives as an Accountability Mechanism – In the past, as many reports have stated, education seems to have been confused about objectives and outcomes. Management by objectives provides for a more systematic measurement of objectives, and, therefore, allows us to say, perhaps, with greater precision than ever before in education, where we are, where we are going, how we are going to achieve our objectives, our major constraints and problems anticipated, and the degree of success in achieving our objectives. Management by objectives also allows us to state more clearly the use of resources and the need for new or differing kinds of resources. It also helps us to discover areas of overlap and duplication and to demonstrate to the public where dollars go and why. It is possible with the management by objectives program to turn accountability problems into positive educational and public relations outcomes for community colleges.

3. Management by Objectives as a Technique for Improving Morale – Many authors believe that if the individuals know what duties are expected and have a voice in defining and developing those duties, and have the opportunity to bring problems, constraints and needs to the attention of those in higher authority, both communication and morale will be greatly facilitated. Once objectives are defined, individuals will have a clearer course of action to pursue, a useful evaluation and helpful feedback on the progress in achieving their objectives as professional educators. As McConnell comments: *"As the distance between the top and bottom in an institution grows, morale problems can become more severe* (1970)." Management by objectives helps provide both a sense of common purpose and the opportunity for involvement in the objective setting process, and, therefore, helps reduce this distance between the top and the bottom by providing a more effective participatory role for all concerned with institutional quality and purposes.

4. Management by Objectives as a Mechanism to Help Develop a Wholistic Institutional Context – Each community college should have a special context which is responsive to the community and which meets special needs of its own environment. Management by objectives, through the needs assessment, the development of the mission statement, and the implementation of institutional objectives, helps insure that a coherent program grows from wholeness and unity, not from a collection of fragmented status-bound vested interests. Too often, college divisions and programs tend to pursue their own interests with little or no communication, interrelationship or evaluation. The end result of a management by objectives program should be a coherent and wholistic institutional program which allows for both the traditional and the innovative and evaluates each in terms of its contribution to the overall mission of the college.

5. Management by Objectives – Advantages for Constituencies – A final justification is in he contribution that management by objectives makes to the different constituencies within the ampus. For the trustees, management by objectives provides a mechanism that allows them to evelop and guide the mission of the college in terms of specific outcomes in being accountable or the public trust. For administrators, management by objectives offers a technique that cientifically and systematically insures that the major functions of management take place on he college campus. For the faculty, management by objectives provides a tool for more omprehensive planning of educational experiences and for more effective educational valuation. In addition, areas of unnecessary duplication, new needs, and old irrelevant programs an be considered and evaluated more effectively than ever before. Students also benefit by nowing in advance what the instructor considers important, what the college as a whole roposes to offer them and what each of the divisions has as objectives for their educational evelopment. Curriculum planning can be facilitated and the adversary nature of much education ight be overcome since the emphasis could shift from the hidden and the unkown to specific chievement of objectives. Finally, the public will be better informed about the mission of the ollege, about the justification for costs, about the kinds of objectives that were achieved, and in ases where objectives were not achieved, constraints and problems that were encountered.

Management by Objectives – The Problems – Naturally, the use of management by bjectives in education has been criticized. A number of authors, Lahti (1971), Hitt (1973), ohnson and Grafsky (1973), have discussed some of the major problems and dangers of the anagement by objectives approach in education:

1. One of the very first criticisms to be raised about management by objectives is the fear of ny emphasis on the trivial, the mechanistic and the easily quantifiable. Many faculty and dministrators fear the loss of the intellectual vigor of the campus, arguing that much of the reativity and true educational benefit of the college experience lies in long-range objectives hich are not easily measurable or, perhaps, not measurable at all. Faculties especially fear that heir courses will be turned into mechanistic short-term, easily quantifiable number counting xercises as opposed to the real business of education which is the development of the intellect. s Enarson writes: *"The work that we do defines measurements that matter. Our 'production te' is the classroom and the laboratory. Everything that really matters and makes a difference in he lives of students takes place behind closed doors – far beyond the reach of managers. The ell rings and the 50-minute intellectual transaction begins. It's all there – the excitement or the ullness, the discipline of good teaching or the time-consuming rambling, the eager attention or he slack-jawed stare* (1973, Pg. 16)."

A related problem is that even where the opportunity exists for complete freedom in writing bjectives, some staff may opt for easily attained objectives and, thus, short circuit the whole

management by objectives approach. Campus leaders must insure that objectives grow from the mission statement and philosophy of the institution and that they are not simply set by individuals as a whim. Participation in the process of objective setting means participation from the top down, as well as from the bottom up. Insuring that objectives are both meaningful and that they add up to a coherent whole educational context is one of the key tasks of management in the management by objectives process.

2. A second fear of management by objectives opponents is that it will create a rigid reporting system and stifle innovation and experimentation in the colleges. Interestingly enough, one of the primary criticisms of colleges has been for their lack of creativity and innovation, starting back with the work of David Riesman (1958) back in the 1950's and continuing on through much of the literature into the 1960's and 1970's. Some opponents of management by objectives conjure up fears of system analysts destroying innovation and creativity in the colleges, or evaluating education by cost or program rather than in light of needs, mission and intellectual content. Actually, management by objectives presents a system to facilitate innovation and educational development. Through the planning, resource analysis, and budget-making process, it is possible to build in innovation as an integral part of the educational program, not as something ad hoc and inconsistent. However, the innovations will be evaluated and assessed, perhaps, as never before in education, and, therefore, as never before, we will be able to say what difference, if any, innovations make in an educational program, in student learning, or in contributing to the functioning of the college as a whole.

3. A third problem is the frequent lack of staff training to participate in management by objectives. Often, objectives are criticized as "statements of the obvious." As indicated earlier in the chapter, the writing of objectives is difficult to do and time consuming. There must be adequate planning and staff training before the system is ever implemented. To solve this problem it is best to start with both in-service staff training and with sample programs, and allow three to five years before anticipating a complete management by objectives program.

4. Another problem is the fear that an atmosphere of hostility and insecurity will be created because of pressures caused by management by objectives. This is a danger if individuals are evaluated instead of programs, and if serious constraints or changes in environmental circumstances are not taken into account in assessing the achievement of objectives. There is no doubt that some tensions and stress will occur as a result of the management by objectives program. Few people really like having their program evaluated. And yet, through the staff development and in-service training, many of the fears and hostilities may be ameliorated before the program begins, thus, saving a great deal of tension and personal concern. Management by objectives is an improvement program, not a program geared to get rid of employees failing to reach objectives. The provision for extensive staff participation should help reduce many fears.

Recognizing that there will not be 100 per cent agreement on tasks, objectives and priorities, it is still possible to reach concensus on most issues. In the long run, the increased participation, the increased communication and the more effective planning and evaluation should help reduce problems rather than create them.

5. A final problem is the problem of individual resistance to change in organizations. The literature is full of documentation of studies of resistance to change at all levels and in all kinds of organizations. This is why it is imperative that the management by objectives program have top level commitment from the beginning, that it be sufficiently planned, and that sufficient orientation take place before the plan is even considered for implementation. In-service staff training and increased communication can also help break down barriers to management by objectives. In essence, management by objectives requires that a management by objectives approach be applied to the planning of the management program itself before attempts are made at implementation.

## Summary

In this chapter, we have looked at the need for effective management tools, the importance of definitions and concepts, the steps in developing the management by objectives program and some of the major advantages and disadvantages in considering management by objectives programs. Whether management by objectives will be an effective technique to help meet the challenges presented by demands for both increased accountability and increased participation remains to be seen. A discussion of how this management theory is applied in practice is the main focus of the remaining chapters.

## CHAPTER III

## THE MEASURABLE INSTITUTIONAL OBJECTIVES APPROACH AT MT. SAN JACINTO COLLEGE

### erview

Utilization of management by objectives in community colleges has been found most quently in large community colleges having access to foundation grants or government ojects. In many cases, a full-time staff member is assigned to work with an outside paid nsultant in order to initiate the management by objectives program. Strong emphasis has been ced on accountability by having staff members predict what their accomplishments will be in a en time – followed by administrative and self evaluations of results.

The procedure followed under the measurable institutional objectives approach to nagement by objectives during the last four years at Mt. San Jacinto College does not fit the ove description. Mt. San Jacinto received no financial assistance to develop a management by jectives system. It has added no extra staff to coordinate the management by objectives ogram. It utilizes no paid consultants. The evaluative emphasis has been placed on measuring e results of programs and not on rating individual staff members. In fact, using the management objectives to evaluate staff has been rejected at this college from the beginning as an workable and morale damaging concept.

In this chapter, we will describe the advantages of this program to the communities who pport the college, to the students who attend, to the faculty who are the managers of the tructional process, to the administrators who coordinate the use of scarce resources, and to the stees who establish policy and evaluate results. Special features of the program involve ntification and reduction of constraints which are defined as obstacles to the learning process, d the use of units of credit based on verified measurable and currently unmeasurable objectives each course. The measurable and currently unmeasurable objectives serve as the principle asure of output for the institution, involving all faculty members in setting instructional jectives through a sample class process, which includes the identification of constraints and nned modifications in teaching strategy.

### ckground

Mt. San Jacinto College was established in 1963. It currently has 5 administrators, 36

time instructors, and 25 part-time instructors. There are 550 full-time and 1400 part-time ents enrolled at the college. Mt. San Jacinto College serves central Riverside County, ading the territory which lies between the cities of Riverside and Palm Springs, but does not ade either. The area served is rural and includes the cities of Hemet, San Jacinto, Banning, Beaumont and surrounding territory with a total population of about 65,000 people. Many lents of the district work in nearby cities in government installations, factories, large retail blishments, and service occupations. Retirement mobile home parks, light manufacturing, and lest agricultural activity characterize the local economy. The racial mix in the college is ghly parallel to the racial mix of the community served: 10 per cent black, 15 per cent ican-American, 1 per cent American Indian, and 74 per cent caucasian.

In 1963, Mt. San Jacinto College began with 320 full- and part-time students housed in ed store and factory buildings. It had a barely adequate tax base and limited, divided mmunity support. After three bond issues failed, campus construction was began in 1965 on ated land with lease-purchase buildings. Following careful study and discussion, the faculty, inistration and trustees were convinced that an individual instructional system primarily zing filmstrips and audio tapes with programmed worksheets had high potential for roving the effectiveness of the instructional program and for building a solid base for winning mmunity support. Plans to individualize as many courses as possible within available resources e formulated. It was decided to equip some of the lease-purchase buildings with individual ent study carrels, each containing a filmstrip projector and an audio tape player and to vide work space for technicians who would assist instructors in the production of filmstrips audio tapes.

Multi-Media Programs

Individualizing more and more courses has been a continuous goal of the college since 1966. efforts exerted and results achieved gained statewide recognition and in 1968 several schools colleges requested Mt. San Jacinto College to share their media with them. When the requests sharing became too great for the college to absorb in its budget, mail order sales of ti-media was implemented. Sales of instructional materials to hundreds of schools and eges now provides the means to partially support continued production and revision of the vidualized lessons.

During the development of the instructional system, faculty members wrote measurable se objectives. A number of the faculty wrote measurable objectives for each lesson. surable course objectives formed the basis for the individualized software – filmstrips, audio

e, and worksheet lessons. Teachers who wrote measurable objectives were employed during ations, summers, and on an overtime basis to write scripts, plan storyboards, write worksheets post tests. Later, teachers were offered extra income for preparing measurable and currently neasurable course objectives in publishable format. These have been copyrighted and offered sale through the multi-media mail order catalog.

Our problem to be resolved in the sale of faculty-produced media to other schools and leges was the residual rights of faculty to the product of their creation. Faculty and ninistration discussed ownership rights with legal counsel, and it was decided to jointly request hange in California law which would allow the college to share with faculty members income m the sale of media after the initial costs were recovered. An influencial member of the islature carried the measure, but it was defeated in committee. The faculty agreed that the tter should be dropped. By that time, it was evident that neither the college nor the faculty mbers would realize any appreciable income from this endeavor. The salary paid to instructors ile writing commercial quality lessons, the money needed for artists, photographers and audio hnicians, and the expense of revising lessons every three-five years meant that direct costs were dom completely recovered and full costs were never recovered. The facts that extra ployment during vacations was made available at full salary to all interested faculty, that h-quality media resulted in more efficient learning, and that writing and planning quality dia provided feelings of satisfaction -- all contributed to the reduction of faculty concern over pyright ownership.

w the Individualized Instructional System was Started

The beginning of the measurable institutional objectives program was modest. The five ministrators at Mt. Jacinto College studied publications on preparing behavioral or measurable jectives, wrote sample objectives, and submitted them to each other for evaluation. After the ministrators began to feel comfortable writing objectives, they each began to assist one or more chers who showed an interest in learning the skill. The following year a University Extension ss on writing course objectives was brought to campus at the expense of the college. Twenty tructors enrolled and wrote measurable course objectives for two courses they taught as a part the Extension course assignment. For completing this assignment, the instructors earned three nester units which could apply to their salary schedule advancement. From that time on, se teachers have continued to write measurable objectives for their courses. ( A measurable titutional objectives approach to management by objectives can only be successful if tructors know how to write objectives and have prepared measurable objectives for a majority

f their courses.)

Faculty members have been motivated to prepare precise course objectives by various eans: (1) administrative example, (2) encouragement by interested administrators, (3) ecognition at board meetings, (4) rewards of salary schedule advancement, (5) summer mployment, and (6) extra pay for course objectives of publishable quality. The task of writing easurable objectives was made easier by eliminating the term "general objectives," "specific bjectives," and "goals." The only classifications used were "measurable objectives" and currently unmeasurable objectives." The latter were defined in an earlier chapter; but since this a critically important step in the measurable institutional objectives approach, the next section ill more fully describe the use of currently unmeasurable objectives.

urrently Unmeasurable Objectives

Since the first professional publications describing behavioral objectives, there has been wide isagreement on most campuses whether it is possible or even desirable to prepare precise easurable objectives for courses. Mt. San Jacinto College was no exception. Faculty members ho taught vocational skill subjects were nearly unanimous in supporting the idea of preparing recis measurable objectives. Certain faculty members who taught academic courses had serious eservations because of the obvious difficulty or the apparent impossibility of preparing easurable objectives which would adequately define what they hoped their students would arn.

While objectives for various support programs were being prepared for the institutional bjectives report, it became evident to administrators that some important program objectives ould not be described in measurable terms. In order to provide recognition for important course bjectives and institutional program objectives, for which there is no currently practical way to easure their output, it was decided to define these as "currently unmeasurable objectives."

Objectives which cannot be measured within the time span of the reporting period, e.g., one ear, are classed as "currently unmeasurable." A currently unmeasurable objective for a literature ass might be: after completing this class, 80 per cent of the students will read for enjoyment at ast 10 books a year selected from the American Classics List. Another example: after carefully udying the issues, 90 per cent of the students completing the American Government class will ote at each local, state and national election. Objectives which occur within the reporting period r which no practical measures are known are also considered "currently unmeasurable." An

ample for a French class might be: at the completion of the course, all students will have a ater appreciation for the French people and their customs.

In practice, a two-column page is used to record unmeasurable objectives. In the left lumn, the currently unmeasurable objectives are listed. Opposite each objective the instructor s the experiences which will probably lead the student to accomplish that objective. In the e of institutional support program objective, it would be left to a teacher, an educational ditor, a newspaper reporter or interested members of the community to decide whether the ted student experience or institutional effort might fulfill the currently unmeasurable objective tement. The following is an example of a community service currently unmeasurable jective:

| Currently Unmeasurable Objectives | How Members of the Community will be Helped to Achieve These Objectives: |
|---|---|
| Residents of the District will make more worthwhile use of their leisure time by pursuing cultural and recreational programs and by improving their knowledge and skills in the arts and in recreational activities. | Organized recreational activities will be provided at least one night per week during the school year.<br><br>At least five major dramatic or musical productions will be presented for the public during the year.<br><br>Musical, dramatics and educational programs will be presented before at least 40 community groups off-campus. All requests for informational speakers will be filled. |

It has been found at Mt. San Jacinto College that every course taught and every support ogram has some measurable objectives. Faculty members are helped to identify readily asurable objectives first and then to list those which are currently unmeasurable. During ceeding revisions of objectives statements, some of the previously unmeasurable objectives y often be moved into the measurable objectives group -- as methods are found to measure ir output. Use of the "currently unmeasurable objectives" concept has eliminated most of the ervations of the faculty about writing precise objectives for courses and support programs.

During the late sixty's, it appeared the California legislature would mandate the

stablishment of a program, planning, budgeting system for all schools and colleges in California the very near future. It also seemed evident that the mandate would fail to take into account currently unmeasurable objectives" and "irreducible constraints." Both concepts seemed basic any program, planning, budgeting system applied to the educational process.

The president of the college and representatives of the Academic Senate discussed the problems which could arise if, and when, program, planning, budgeting system was mandated by the legislature. The administration and the Academic Senate agreed that application of an industry-oriented program, planning budgeting system to the college could be a disasterous blow to staff morale and would tend to defeat the basic philosophy of the college. The fears of all concerned were the same; that adoption of a rigid, cost-oriented system would make it exceedingly difficult to maintain the college goal of recruiting students with marginally developed learning skills and helping them achieve a successful educational experience.

If class evaluations were rigidly sought, without regard for currently unmeasurable objectives or for the constraints which are inevitable with high-risk students, faculty members would find themselves torn between serving students and serving a system which rigidly demands high results at a low cost. Consequently, the administration offered to work toward developing a system for reporting progress of the institution as a whole, and its identified programs, which would not be utilized as an individual staff evaluation device. Assurance was further offered that any system developed would not require more than three or four extra hours of instructor time each semester for reporting -- and that the report writing would be done by college administrators.

Administration and faculty agreed that, if a system of reporting results could be devised which did not do violence to the college philosophy and did not reduce morale, it might also become a useful public relations instrument in local communities. If the system were successful, they hoped it might influence the development of a workable mandated state management by objectives system. Some faculty members were skeptical that assurances given by administration would be upheld in light of pressures for teacher evaluation -- evaluations based on raw results of student achievement without regard to constraints. This fear was partially reduced when a newly state mandated faculty evaluation procedure was developed by the local faculty and administration and approved by the trustees without reference to output measurement. During a meeting for developing an evaluation procedure with faculty, administration, and trustee representatives present, the college president emphatically declared that he would not promote the development of any management by objectives system that would be used as a basis for

:acher evaluation.

he Statement of Educational Philosophy is the Foundation for Management by Objectives

In order to evaluate the institution as a whole, there was a need to identify measurable rogram objectives and institutional objectives based on the statement of philosophy of the ollege.

When Mt. San Jacinto College was first organized, a widely representative community dvisory committee was asked to develop a statement describing in broad terms services and anctions which the new college should provide. The college staff, taking the committee's uggestions with only non-substantive editing, submitted the committee's statement to the board f trustees. The trustees reviewed, revised, and approved the statement of philosophy. This nitial statement has been regularly reviewed and revised by a combination of the staff, aculty-student committees, citizens' committees and the trustees prior to each accreditation isit. This statement of institutional philosophy is published in the college catalog, and in the ront section of all measurable institutional objectives reports made to the trustees and to the ublic. Following is a recent revision of the philosophy statement:

hilosophy

> Mt. San Jacinto College is dedicated to the principal that through education man finds realization of his potential as a human being. Man achieves this potential through various means. Therefore, Mt. San Jacinto College provides as wide a variety of approaches to the process of education as possible. Emphasis is placed upon self-directed study on the part of the student, understanding that in the final analysis education is gained, not given.
>
> We believe that the final test of education is the student's ability to judiciously evaluate, work skillfully, and to transmit knowledge to others, therefore, we shall insist on involving the student in discussion and writing toward that end.
>
> We believe that we are a part of the community we serve

and seek to provide faculties and programs for the enrichment of the individual and the improvement of community, state, and national life.

We believe that education has many faces; therefore, we are pledged to provide instruction in the widest practical range of academic, occupational and technical fields to serve the needs of individuals and the community.

Immediately following the statement of philosophy in the college catalog is a list of the five purposes or institutional objectives of community colleges. These were discussed by faculty, students, administration and trustees and finally set forth the college in the format shown.

To accomplish the benefits, concepts and attitudes expressed in the statement of philosophy, the college provides:

1. Occupational Training – For those students desiring to complete a vocational curriculum the college offers technical training when student enrollment justifies the use of facilities and personnel. Individual courses are offered on the same basis when a full curriculum is not justified. In both instances, the college's aim is vocational competency.

2. General Education – For all students, those with a specific vocational objective, and those whose aim is a liberal education, the college seeks to inculcate attitudes and develop the knowledge and skills essential to effective living. These include:

   a. Exercising the privileges and responsibilities of democratic citizenship;

   b. Communicating thoughts clearly in speaking, and in writing; and cultivating the ability to read and listen with understanding;

   c. Using the basic mathematical and mechanical skills necessary to everyday life;

   d. Gaining a balanced perspective of world time and place through an understanding of cultural heritage;

   e. Appreciating the creative activities of others.

3. Preparation for Transfer – Mt. San Jacinto College provides the first two years of college work for those students who plan to transfer to a four-year college or university. The curriculum includes the lower division requirements in the liberal arts, and in scientific, business education, and other professional fields.

4. Community Service – Mt. San Jacinto College cooperates with other schools and colleges in providing adult education. This program is offered primarily through college evening classes. The college also presents athletic and cultural events, including musical programs and lectures, as a community service.

5. Guidance – Mt. San Jacinto College assists its students to "know themselves" through an integrated guidance and counseling program.

nformal Needs Assessment

When the college was first organized, the general advisory committee set up a subcommittee o explore various methods of assessing the community needs. It was the recommendation of this committee that a questionnaire be used to help determine the initial classes and special services to e offered; and that it be sent to high school seniors who expressed a desire to enroll in the new college and to people in the community who indicated that they planned to attend classes. This recommendation was followed and as a result, very few scheduled classes had to be cancelled because of insufficient enrollment.

For determining future courses, it was decided to use needs assessment as an informal continuous activity. Students who respond at registration time by filling certain classes early, or by enrolling in other classes in such small numbers that offerings had to be reduced the next semester, expressed their felt needs in an unmistakable way. Community members who petitioned the college administration or trustees for a concert series, forum series, or short general interest courses also indicated services which they desired from the college. Advisory committee members who discussed agenda items about community needs also provided useful information. When requests for services are consistent with the approved educational philosophy statement and they can be satisfied within the resource limitations of the college, they are accepted by the trustees and become a part of the college program. The combined judgment of faculty, students, administration, and organized community groups (such as advisory committees, College Patrons Association and others), provide needs assessment input which leads to recommendations upon which the elected representatives of the district (the trustees) act.

There is a serious doubt in the minds of the staff at Mt. San Jacinto College that a formal needs assessment questionnaire or a one-day needs assessment conference every year would provide additional significant or useful information regarding the needs of the residents of the

communities being served. It appears to the college staff that people not immediately desiring service from the college respond to broadly distributed questionnaires about needs assessments as they believe they are expected to respond and not as potential students and attenders of special events.

Instructional Ends Objectives

As another step in the development of a management by objectives system, the college president first proposed to the administrators and then to faculty groups that instructional output be measured by means of units earned by students and by grade points earned.* The president explained to faculty groups that since most of them had already prepared course requirements with measurable objectives and precise grading criteria, the unit and grade reports of the attendance accounting department would provide the best available institutional output measures. Then, when direct costs per unit earned have been calculated, these output measures can be used to analyze cost trends and predict costs of alternative teaching strategies.

As these output measures were applied by faculty, they proposed that dividing their courses into measurable and currently unmeasurable objectives for each unit of credit would more accurately measure output. Under this plan, a student may earn one, two or three units for a three-unit course, e.g., if he masters two-thirds of the measurable and currently unmeasurable objectives for a three-unit course he would receive two units. This partial concept has other advantages to students which are described later in this chapter.

In an attempt to develop a plan which would provide the maximum potential for the immediate improvement of output, the president suggested that each full-time teacher carefully study the potential output of one of his classes. This plan is at the heart of the institutional objectives approach; and it was first put into effect under the title, *"The Experimental Class Plan."* The title, unfortunately, led to misunderstandings of the intent of the plan. The term "experimental class" gave the impression that the output of this class would be compared with the output of all other classes taught by the instructor – without any adequate control elements such as matching of students and teaching strategy. So, a new name was given: *"The Sample Class Plan for Projecting Output and Constraints."*

In the plan, each instructor was asked to pre-select one class as his sample class. All of the

*To reduce the risk of producing a self-serving statistic, instructors were encouraged to confirm their measurable course objectives and precise grading criteria with teachers at other institutions. Also, the grade point averages of students who transfer to four-year colleges and universities are carefully compared to see that grading standards are maintained at the local community colleges.

classes in college would have been treated the same way if there had been time enough to do so, but by selecting a different course taught by each teacher each semester, all courses could be studied every two years. The term "sample class" successfully conveyed the idea of each teacher and his administrative representative** selecting a small number of students to develop a strategy designed to improve the output of the whole institution.

At the end of the second week of the semester, each teacher and his administrative representative** conferred regarding one of the teacher's sample classes. At this conference, they discussed the results of the pre-test given to these students, and any other available data, which might give clues to the learning problems of the students and help identify major obstacles to learning (or constraints) that might keep all students from completing the course and achieving all course objectives.

The teacher and the administrator discussed ways to help reduce constraints such as changing the teaching strategy or even asking the counseling office to transfer some students to other classes when pre-test results indicated a need for remedial or prerequisite courses.

The administrative representative and the teacher then discussed steps which could be accomplished by administrative action to help reduce other identified constraints.

By the third week of the semester, the administrative representative prepared a summary report including course titles, numbers of students enrolled, a prediction of the units which the students will earn, and the projected grade averages for the classes. In addition, agreed-upon constraints, beyond the scope of administrative representatives and faculty to reduce, were listed as irreducible constraints. The list of irreducible constraints was presented to the president during a conference with the administrative representatives the fourth week of each semester.

At the end of the semester, the teacher and his administrative representative analyze the results of the students' achievements in the sample class, based on grades earned in accordance with the grading plan, and on constraints. Reports on sample class output are presented in writing to the president and to the teacher.

The conference process is reviewed and revised as needed annually. After reviewing and evaluating the process, the staff believed that the following outcomes were achieved:

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**All administrators including the college president and the vice president in charge of business affairs are assigned a panel of instructors to serve as an instructional coordinator. This relationship includes much of the administrative work which in a larger institution would be done by a department head.

1. Class drops were reduced by determining the causes of withdrawal and by eliminating the need to withdraw. Special assistance was provided to students, including tutoring, special counseling, and individual assistance based on the students' needs, thereby significantly reducing the withdrawal and failure rate.

2. Instructors learned more about students at the beginning of the semester and tailored instruction to the student's individual needs through special assignments or partial credit for students.

3. Students achieved more objectives and earned higher grades. By having objectives and grades verified, teachers can justify any distribution of grades given such as all passing grades. The normal curve, which forces unnecessary competition and frustration can be eliminated.

4. The constraints that administration could reduce for selected classes were identified and the administration reported to the instructor on the follow through; i.e., more library resources, physical plant adjustments, funds for tutors.

5. The constraints that the teacher could reduce for his class were identified and the plan for reducing constraints was incorporated in the teacher's professional objectives. At the end of the semester, those that were accomplished were reported; e.g., a new diagnostic test was developed, or new teaching methods were introduced.

6. A list of projected and confirmed constraints for the whole institution was developed. These constraints were beyond the control of the college or instructor, at least within the current semester. Some were listed and verified so that the public did not expect the impossible from the college; e.g., student withdrawals due to relocation or illness. Other constraints were listed with a price tag attached so that the trustees could determine whether additional resources could be obtained to further reduce these constraints.

7. Students who expended only slight effort were identified and techniques to help them increase their effort such as the human potential seminars were devised.

## he Human Potential Programs

The staff of Mt. San Jacinto College took the position that a viable management by

objectives system for an educational institution cannot be developed without identifying the most significant constraints and planning a program to reduce those constraints. This step is a crucial aspect of a management by objectives system. A list of identified constraints was developed and incorporated into the college's institutional objectives report, and a plan for reducing the most significant constraint was developed. At the end of the first semester of using the sample class plan, an overwhelming majority of instructors and their administrators identified "lack of motivation of students" as the principle constraint.

The president called several knowledgeable people around the country asking if they knew of programs designed to assist with the problem of poor motivation. One suggestion was the Human Potential programs being developed in several colleges and universities. The program was explored, and people associated with the program were brought to campus on several occasions to describe the process to the staff and to eventually train staff volunteers in the utilization of the process.

The original program had limitations affecting its utility at Mt. San Jacinto College. Under the leadership of the dean of student personnel, the staff studied a wide variety of similar programs and eventually prepared the Self-Actualization by Group Process.* In addition, the staff prepared training manuals for group leaders, manuals for instructors using the process with their students, and manuals for the students or participants to use. The process has made a significant difference in the empathetic regard faculty members have for each other and for students. Student participants have, in a large number of cases, shown improvement in many effort factors which influence motivation. The faculty has expressed approval that the resources of the college could be rallied to reduce a significant constraint which they had identified. Another faculty identified constraint led to the establishment of a new and much more extensive learning laboratory for teaching reading improvement and basic writing. Thus, constraints were not only identified; they were reduced for the direct benefit of both faculty and students.

## Projecting Anticipated Output

The sample class projections are used as guidelines for projecting the anticipated output for all classes. This gives a method for calculating the unit cost for the output of each instructional department. If output is going down rapidly from the previous year then a reason is sought. As an

*This positively oriented group process includes: life style assessment, verification of assets, imaginative exploration, identification of values, choice making, best moments, identification response, self disclosure, reaffirmation group planning, and a plan for self-actualization.

mple: for each of the last three years, the output of units earned by students in foreign uage classes has consistently gone down. The irreducible constraint here is the national nward trend in numbers of foreign language students due primarily to removing language uirements for many college majors. The information, thus, made available makes it possible to e a better analysis of various alternative actions which can be taken to cope with a rapidly g cost of instruction in one department. If costs per unit earned increase disproportionately a given department, then the faculty members and the coordinating administrator can seek cause and try to remove the cause. An example of how this functioned occurred when the tography department increased its advanced offerings. The enrollment in advanced classes was tively small in comparison to beginning photography classes. To solve the problem, the ructor developed individualized instructional media, permitted both beginning and advanced lents to enroll in any and all classes, and to progress as rapidly as possible to meet the course ctives. This meant that, because beginning and advanced students would be in the same ses, all classes would have full enrollments. It also meant that if some students dropped out of ass, it would be possible to enroll a new student in the middle of a semester. The change to vidualized, continuous progression education significantly increased the output of the tography classes and reduced the cost per unit earned. This change probably would not have n accomplished if both administrator and faculty member had not been looking at costs per and had not been looking for ways to reduce these costs.

The faculty-administration conferences on sample classes is the principle method used at Mt. Jacinto College for setting objectives and determining constraints on instructional programs.

v the Institutional Objectives are Reported to the Trustees and to the Community

The institutional objectives for the year are reported to the board of trustees at their ober meeting. These objectives have been formulated by faculty and administration and mmended by a vote of the faculty prior to their submission to the trustees. Another report is le at the following August or September meeting of the trustees where the objective ievements" are presented. In the October report, an estimate cost per unit for each subject ght is included. In the August report, there is a statement of actual costs per unit earned by ect matter. (The costs presented represent the direct costs only which include salaries, fringe efits and supplies. Other costs are reported for service functions as total amounts, e.g., munity service $64,217.)

Faculty members had expressed concern over the possibility that determining costs for

cts might cause trustees to disapprove of the teaching of high cost courses. To try to dispel oncern, the following paragraph was included in the Forward to the institutional objectives t:

"There has been some concern expressed by educators throughout the nation since the term gement by objectives was first applied to education that, should costs vary widely between cts, management decisions might be unduly influenced by the cost factor. The philosophy ie institution, stated at the beginning of this report, should establish the framework for ng management decisions including the factor of cost. The statement in the philosophy, ". . pledge to provide instruction in the widest practical range of academic, occupational and ical fields to serve the needs of individuals and the communities, sets the basis for gement decisions."

The college administration and faculty agreed that no report of institutional objectives and achievement can expect to depict all of the services rendered to students or to the nunities served. By making an effort each year through evaluating and improving the report, taff believed that more precisely measurable institutional objectives will be identified and ed, and the program will ultimately be changed to better serve the students and the nunity.

Because management by objectives reports have been viewed by some legislators as a means valuating staff, faculty concerns were frequently expressed regarding this eventuality. The ard of the report to the trustees included the following three paragraphs bearing on the traint variations associated with any one group of students and disavowing this management bjectives system as a means of staff evaluation:

"The reader is cautioned to make special note that this document includes in its title, the s INSTITUTIONAL OBJECTIVES. No one instructor nor administrator, with the possible otion of the superintendent, can be held personally accountable for any one class section ut or one course output. There are too many human variables associated with the input rs (the students) to be able to identify, classify and make precise judgments about the traints which apply to any one group of students.

The institution, when taken as a whole and with its measured output statistics compared year to year, can show the instructors, staff, trustees, and the communities served, the t to which progress is being made toward meeting the institutional objectives in a more cost

ctive manner. The degree to which the trustees hold the superintendent ultimately ponsible for the output of the institution as a whole should determine his accountability for se results."

These statements were taken seriously by the trustees, and management decisions made ed on the data provided in the report did not subvert the avowed intent to resist using nagement by objectives in faculty evaluation. Faculty support for the management by ctives effort rallied as confidence that the data generated would not be improperly used was firmed.

The final step in the management system was the educational audit.

ucational Audit

The measurable institutional objectives approach to management by objectives, even with its tistical reporting of measurable output and cost figures for courses and programs, represented y a staff report made to the governing board. Despite its attempted objectivity, it still lacked element of credibility desired by legislators and by a segment of the public. The ninistrative staff felt that the credibility could be improved by having an outside audit of the ievements identified in the objectives report. The college president presented to the trustees a n for nominating and selecting the educational auditor and for outlining the audit cifications.

He proposed that a panel of four or five individuals with wide experience in community lege administration and with earned reputations for professional independence be nominated the administration and trustees. He suggested that a letter outlining the specifications for the ucational audit and including the maximum fee to be paid, be sent to all nominees. In the lies requested from the nominees, they were asked to indicate their interest in performing an lit and to propose an hourly fee to be charged for themselves, for their professional assistants, l for their clerical assistant. The president proposed that the chairman of the trustees interview candidates and recommend to the board of trustees one nominee as educational auditor.

After this procedure was followed, an auditor verified by sampling the output records which re being prepared for the trustees. The auditor and his assistants interviewed about one-third the college faculty and checked college records for measurable and currently unmeasurable rse objectives, verification of objectives, and precise grading plans. The auditors reviewed the

institutional output records for total units earned, measurable objectives for student onnel work and for community services rendered. The auditors also sampled or completely ed all other statistical records included in the achievement of objectives report.

At the board of trustees meeting in August where the "Objectives Report" was discussed, auditor reported his findings and made recommendations for improving the record-keeping reporting systems.

The local newspaper reporters present asked questions, commented on the "report" and the . Subsequently, they wrote favorable news stories about the efforts of the college to ement a management by objectives system and provide an educational audit. The news rage was given a prominent place in the local press. Trustees and administrators were of the ion that the favorable publicity, focusing everyone's attention on improving output and cing constraints, and the additional data made available for management decisions, made the t worthwhile.

etrospect

There has been widespread concern about what is being purchased by taxes paid to support utions of higher learning. The measurable institutional objectives system provides a carefully mented and audited report of the college output and the costs for achieving those urable and currently unmeasurable objectives. The program has provided students with a safe" instructional system where they can succeed, if they try. The students know the e requirements for each unit to be earned and the specific grading criteria. They know that s will be awarded on a fixed set of criteria with no grading curve being applied. Students are e that the college is organized to be responsive to their needs; that whenever possible, uction will be tailored to their individual differences so that they may complete as many e objectives as possible. Though the Self-Actualization Group Process students are helped to r understand themselves and to participate in education in humanizing ways. They also get now their teachers and peers on a personal basis through this innovative motivational nique.

Advantages of the institutional objectives system to faculty are highlighted by the fact that ers now have a regular opportunity to identify constraints which keep their instruction from as successful as possible; and they have a commitment from the administration and trustees y to reduce these constraints. Another advantage is that the system gives them a regular

ortunity to have others become aware of their accomplishments. The instructor has an ortunity to set realistic objectives for the output of his sample class or all of his classes, to k toward those objectives, and to experience the sense of accomplishment when the ctives are achieved.

The measurable institutional objectives approach has furnished trustees with an organized hod of looking at the output of educational programs along with the constraints. The costs of grams and cost of constraint reduction is also available for careful consideration. The parison of costs of courses by categories from year to year shows what the cost trends and put trends have been over several years and affords additional information for policy isions. The system reminds trustees that policy decisions are first based on the philosophy or sion statement of the college and are then based on the most cost effective teaching strategies. rustees become convinced that educational output can be increased by constraint reduction or reased capacity, they have the necessary facts to justify to the electorate a tax rate increase.

Administrators find the system advantageous in fulfilling their role as leaders of tructional improvement. The conference sessions with instructors provide a means for proving instructional methods and techniques. At the end of the semester, the output omplishment and constraint verification discussion provides an opportunity for both ministrator and instructor to sharpen their perception of the learning process.

The principle disadvantages of the measurable institutional objectives approach are the extra e and work the system requires of administrators. The approach also runs the risk of any tem which identifies program costs – that of having raw cost figures used in making policy isions without regard to identified constraints or without regard to the underlying college losophy/mission statement. By making a management by objectives report available to the blic and to the press, there is a risk that some raw cost figures will be taken out of context and d to make the program at the college look like it is unwisely using public funds. At Mt. San into College these concerns have been recognized as real, but they have not materialized. We nk this is possibly true because the system has been initiated gradually over five years, with the blic and the press being constantly informed.

It is hoped that other community colleges will adopt all (or part) of the measurable titutional objectives approach to management by objectives; and, by exchanging information, mote the development of a productive system of measurable and currently unmeasurable titutional objectives. The staff of Mt. San Jacinto College feel that we have a system which will

nly improve the cost effectiveness of community college education, but more importantly, de more effective educational programs for students.

## CHAPTER IV

## THE PARTICIPATIVE MANAGEMENT BY OBJECTIVES APPROACH AT COAST COMMUNITY COLLEGE DISTRICT

The main idea underlying the management by objectives program in the Coast District is hat educational management in the community college can be substantially improved by uniting he scientific dimension of management and the human dimension. The Coast District efforts are ased on two primary assumptions. First, that management by objectives is the best present-day presentation of science-based management. Secondly, that the genuine involvement of the eople in the educational community in the management process constitutes the best presentation of the human dimension of management. Combining management by objectives nd participative management provides the basis for humanistic management in the Coast ommunity College District.

Orange Coast College, established in 1947, and Golden West College, which opened its doors 1966, currently enroll approximately 45,000 students in all programs. Combined staff include 52 full-time instructors and 37 administrators. The colleges serve the southwestern portion of range County, California, including the cities of Costa Mesa, Huntington Beach, and Newport each. The area is densely populated encompassing over 400,000 people within a wide ocioeconomic range. Agriculture, manufacturing, and recreation are primary industries. The cial distribution in the district is: 2 per cent black, 8 per cent Mexican-American, and 90 per nt Caucasian, and the colleges' enrollment patterns are similar.

The use of educational objectives began in the Coast District perhaps not unlike similar ginnings in colleges across the nation. A few instructors taking graduate school courses in riting course objectives, an enterprising dean of instruction offering faculty the option of being aluated on the basis of their course objectives, and an awakening interest by district staff in pporting such efforts were the first signs. These were followed by faculty fellowship awards to courage the use of objectives, by training programs in the writing of instructional objectives, nd by in-service contracts giving salary schedule credit for innovative teaching programs utilizing jectives. All efforts were voluntary and resulted in 70 per cent of all instructors employing jectives in the courses they taught. Despite this accomplishment, a major component was issing. A major portion of the institution was organized to march forward in a systematic anner but there was no clear agreement on the direction they should go. Instructors had their jectives, but some of their administrators had neglected to write theirs. Further, there were no

greed-upon systemwide objectives to relate to the instructional objectives, a situation found in any community colleges across the nation. The problem was clear enough; objectives were part f a hierarchy which began not with instructional objectives, but with a guiding institutional ission statement; systemwide objectives ended not with course objectives but with unit, even ith lesson, objectives. There were, of course, not only instructional programs which needed rganizing and system, but also support programs, including the administrative, which had the me need. It was this need, then, that set the stage for the humanistic and participative program f management by objectives now being implemented in the Coast Community College District.

Coast District's efforts to implement participative management by objectives was the result f a major project aimed at increasing the effectiveness of educational management in the ation's community colleges. These activities began in May of 1972, with a three-year grant of pproximately $410,000 from the W. K. Kellog Foundation to Battelle Research Institute's enter for Improved Education. The program is being carried out in cooperation with the League or Innovation in the Community College. Goals of the program are to develop a planning and anagement model for community colleges; to demonstrate the model's effectiveness in actual se in three League districts (Brookdale Community College, Cuyahoga Community College, and oast Community College District); and to implement the model nationally through conferences nd workshops.

The major idea underlying humanistic management is the application of management by bjectives within the context of participative management. The functions of management in the oast District include planning, programming, budgeting, and evaluation. Taken together, these ctivities should form a decision-making procedure leading to the efficient allocation of resources o achieve specific objectives.

## ncorporating the Human Dimension

How does the educational manager make effective use of this rational approach to anagement? The application of management by objectives to education without consideration or human feelings, desires, and values could well do more harm than good. Some suggestions for niting the participative dimension of management are presented below.

## electing a Coordinator

The identification and selection of the individual who will guide the implementation of the

rogram in the colleges was the first significant step in the process. Important considerations in naking this decision included establishing the need for such a position, identifying desirable haracteristics and skills, examining methods by which the selection was to be made, and letermining the responsibilities and functions with which the coordinator was to be charged.

The remaining major steps in the process itself clearly indicated the need for establishing his position. The coordination of the efforts involved in making the institution really ccountable were made the full-time activity of the person selected.

It would have been relatively simple to assign a business manager, a systems analyst, or even n "efficiency expert" to the task. There can be little question that a knowledge of planning, rogram analysis, and budgeting was a necessity. However, management by objectives required he participation of staff members, students, and citizens from the community. Much of this articipation comes in the form of writing objectives and in choosing alternative ways of reaching hose objectives. It was important, then, that the individual selected for this position have the kills of motivating people and the ability to develop in those participating a sense of confidence n both him and the project. Participants had to feel that goals selected were their goals; the neans for reaching the goals was designed by them; and that they, as members of the college "community," would evaluate their own success at meeting the goals.

The primary function of a coordinator for accountability was to organize and guide a lanning team in its efforts to attain participative management using specific objectives.

Organizing the Planning Team

In getting the planning team off to a productive start, there were several necessary steps: irst, potential key members were identified; next, the possible contribution of each was analyzed efore selection; and, finally, strategies were developed for the initial meeting of the team.

Identifying initial members of the planning team was a function of the coordinator. Though e sought advice from various administrators, instructors, or students, the structure of the team vas designed by him. Subsequent additions or deletions, however, resulted from a decision of the roup.

Size was an important consideration when establishing a planning team. Multi-college istricts have greater difficulty than single campuses. Yet, faculty, students, and administrators or upportive staff, as well as the community at large and the board of trustees, were represented to

nsure full participation in the acceptance of the process. The necessity of training in the use of management skills did limit the team membership.

The following is the membership of the planning team at Coast Community College District. An analysis of the value of each potential member is also included:

1. President of the College – Whereas it is important not to permit the office or personality of the president to inhibit discussion or action of the planning team, his participation in activities, such as setting goals and developing program structures, can assure his acceptance of necessary subsequent changes.

2. College Officer for Business Affairs – Although accountability involves program planning to meet college wide goals, it also involves cost accounting, and ultimately, cost effectiveness. The college business manager or equivalent can identify existing structures for gathering financial statistics or can help implement new ones.

3. Dean or Vice-President for Instruction – Clearly, a large number of persons in the college community are directly responsible to the instructional supervisor. Instructional costs represent the greatest single expenditure of the budget. This particular individual can offer great benefits in encouraging the development of specific objectives for college instructional programs.

4. College Officer for Educational Planning or Development – This administrator can contribute expertise in evaluation, new cost-effective program development, and in identifying state and federal resources.

5. Director of Extended Day or Evening College – For effective management, college facilities must be utilized efficiently as many hours and days as possible. Frequently, extended day or evening classes are under separate funding involving special rules, thus necessitating this administrator as a member.

6. Faculty Association President or Senate Chairman – It is important that the chief elected officer be the team member. His influence as the chosen spokesman for faculty concerns can be significant value in allaying fears and encouraging participation.

7. Student Association President –

8. Support or "Classified" Staff Association President –

9. Board of Trustees Representative – The board may ultimately be asked to approve changes in program structure and in the means by which resources are allocated. The early participation in the implementation process facilitates their approval.

10. Coordinator of Accountability – The role of the coordinator will be a difficult one as he is guiding a group whose members possess divergent points of view and backgrounds. His ability to instill the feeling in the members that they are members of a team all trying to reach a common goal will be his most significant contribution.

The initial meeting of the planning team was of crucial importance to the project and so to the coordinator. Some members of the college community were offended because they were not selected for the planning team and others were offended because they were. It was extremely important to announce the first meeting with a personal letter suggesting that the individual was a key member, absolutely essential to the success of the project. A brief summary of the advantages of accountability to the college was included with an explanation of why Coast planned to implement it.

At the first meeting several tasks were accomplished. First, everyone was made aware of the potential and particular contributions of each member. Then, the specific activities of the planning team were discussed. The following are functions for the planning team:

1. assists in administering educational needs survey;

2. establishes institutional goals with priorities on basis of needs survey and other relevant data;

3. designs program structure;

4. helps staff members develop program objectives and evaluation criteria;

5. estimates available resources (multiple year);

6. coordinates program analysis and preparation of program budgets;

7. recommends resource allocation;

8. assesses program performances as budget is executed; and

9. prepares a public report and reviews institutional goals and program objectives for revision.

The importance of continuing membership on the team throughout the project was stressed. As indicated in the analysis of the selection of members, each was in a pivotal position to bring about the implementation of the concept in this particular area. Philosophical and emotional commitment by planning team members helped develop the same attitude within those whom they represent. Finally, a significant but unmentioned function of the first meeting was to permit those who feared accountability as a threat to existing programs or an inhibitor to the development of new ones to express their concerns. It gave the opportunity to the coordinator to emphasize the greater participation in management of resources that will result from implementing accountability. And, indeed, it provided the opportunity for top management to express their commitment to the broadening of decision-making powers in the expenditure of the budget.

Participative planning is not an easy process. It is a time-consuming approach, and the planning coordinator found it extremely difficult to achieve a community consensus on the statement of systemwide objectives. The resulting benefits, however, proved that the entire effort is worthwhile. As a result of active participation in planning, staff members, hopefully, will be motivated to work toward achieving the objectives because they participated in the development of the objectives.

## Assessing the Needs

Most community college administrators will assert vigorously that their college or multi-campus district has its goals already stated in the most recent accreditation report. Unfortunately, regardless of how well-written Coast District's goals were, they frequently suffered from the lack of some significant element. They were often not specific or did not permit measurement for evaluation. For this project, the definition of a goal was a broad statement of purpose to be achieved by society but to which the educational system will contribute by attaining related objectives. Whereas an objective was a statement of an outcome of a program which will contribute to the societal goal to which it is related. Objectives were, in fact, the sub-steps to be performed to reach a goal. As we shall see, measurable objectives are very important to programs in the program structure evolving in our efforts to implement management by objectives. They must emerge from programs that are expressly designed to meet

he systemwide goals established by the institution.

An effective way of establishing goals or for determining the validity of those already existing is to perform an assessment of the needs the college must meet. Some tested needs assessment survey forms were available which required relatively small sampling. The one used by the Coast District required that seven separate groups from the college "community" be surveyed.

Careful administration of the survey can greatly enhance its successful use as a means of establishing priorities. Each member of the planning team was responsible for administering the version of the form suitable for the group he represented. Care was taken not to code survey forms or force everyone to participate. The form should be returned within a few days of its distribution and follow-up telephone calls or memos can be used.

Should another form of needs assessment be desired or more helpful, different administration techniques would be appropriate. It is important that the form used does not preclude the discovery of previously unknown needs. Another tested needs assessment form is available from the Educational Testing Service of Princeton, New Jersey. The Delphi Technique also may be employed to discover "needs" as perceived by members of the campus "community," institutional research, and advisory committees. It may be, of course, that needs are already expressed in college catalogs, board policy manuals, or faculty handbooks and need only be found and carefully articulated. Merely to determine how well the college is meeting existing well-known demands suggests that the existing structure is satisfactory but is not efficient. It may well be that new programs to meet previously undetected needs should be added to the present program structure, or, of course, some programs may still be in the structure even though there is no expressed need for them.

Basically, the survey used by Coast will indicate:

1. to what extent the college is meeting various needs considered appropriate for the community colleges;

2. to what extent these "appropriate" needs are applicable to the college;

3. the degree of importance the members of the college "community" attach to needs now being addressed;

4. the extent to which present efforts to meet these needs are being successful; and

5. the degree of importance attached to needs not presently being dealt with.

This data can be applied to two distinct questions in any efforts to establish systemwide goals:

1. What existing programs should be revised or deleted?

2. What new programs could be planned to meet needs not now being addressed?

To answer these questions:

1. The needs suggested in the survey can be ranked by the degree of importance the "college community" members attach to them.

2. The effectiveness of programs in meeting these needs can be addressed.

3. Needs not now addressed by programs can be identified.

4. Programs not presently meeting any expressed needs can be identified.

Data analysis was presented in a report to the planning team members along with other relevant data which enabled them to make major contributions to the formulation of the college's mission statement and systemwide objectives. An opportunity for involvement was provided through a series of meetings in which the various groups expressed their different points of view concerning the objectives. The desired end result was a clear statement of the mission and the systemwide objectives, arrived at and agreed upon by these representatives. The following is the mission statement and the several supporting systemwide objectives now collectively agreed upon by members of the Coast District educational community.

Mission Statement for the Coast Community College District

To provide an environment which enables students to discover their learning through self-fulfilling activities into intellectual, social, and cultural growth.

Systemwide Objectives for the Coast Community College District

1. to provide a program of transfer education

2. to provide a program of adult continuing education

3. to provide a program for career education

4. to provide a program of community services

5. to provide supportive services enabling a member of the community to pursue his personal educational objectives

6. to provide a program for cultural and personal enrichment

The planning team will work together in analyzing three existing programs, including both ucational programs and support programs. Each program will be evaluated in terms of its ntribution to the systemwide objectives. Plans are made to either modify or eliminate those ograms not contributing to the college's objectives. A note will be made of those objectives for ich no programs exist. Obviously, there are many "constraints" involved here. Tenured culty, for example, may need retraining so that new subject areas may be taught. Staff velopment programs may also be needed, but the constraints do not justify the continuation of ograms where there are virtually no students enrolling because of changing environments in -year institutions or in the world of work.

It is hoped that the planning team will generate ideas for the development of new programs d the modification of existing programs. The planning team is expected to work together in tegrating the total array of programs. These programs, along with the objectives, will be ganized within a systems framework – as an integrated whole.

This approach to programming has several important applications for the district. First, the tional structuring of programs will make them compatible with the overall management by jectives process. Second, the involvement of a wide range of people in the programming ocess can lead to many innovative ideas for program improvement. Even if only a fraction of e ideas stand the test of critical evaluation, this can still be a worthwhile effort. Third, it may necessary to eliminate certain job positions as a result of scrutinizing existing programs against wly stated objectives. This does not mean, however, that the individuals filling these positions ll lose their jobs. If they are contributing to the college's objectives, they will be transferred to fferent positions.

## ermining a Program Structure

When needs are assessed and appropriately related goals outlined, they can then be used as lelines for examining the college's existing program structure. A program for this purpose was ned as a series of independent, closely related services and/or activities progressing toward, or tributing to, a common objective or set of allied objectives. Coast District is presently at this nt of program examination in its implementation of participative management. The planning n is working toward the development of a program structure which will permit program lysis. Three "pilot" programs fitting the definition just given have been selected for analysis: ogy, in the area of transfer education; secretarial science, in the area of career education; and nseling, in the area of support services.

Several techniques are possible for determining a program structure:

1. A program structure can be established by examining major activities of the institution, such as teaching reading, performing administrative functions, providing food services, etc.

2. The existing organizational chart for the district can be used as a base. The duties of each person listed will also offer a structure of activities which can be grouped in programs.

3. Models from other institutions are also possible guides. These are usually by subject area, physical location, or instructional level, such as freshman, sophomore, junior, or senior.

viously, the present program structure, whether it be organized by activities, divisions, artments, or degree programs could provide the basis for an analysis of the costs of each of its ts. This, however, would suggest that all programs addressed one or another of the district's ds and that all needs were addressed by one or another of the district's programs. This is bably not the case. Therefore, a careful study of the goals and their priority ratings may offer iable information about the necessity to revise the existing program structure.

The program structure is the basis used by analysts to generate, organize, and display ormation about the activities of the district. Yet, such analysis may only indicate that it costs 400 per student per year to take part in a training program in graphics as opposed to $300 for majoring in English. This kind of information, without the input from an assessment of needs

an examination of goals, can easily result in erroneous decision-making. An effective analysis res the assurance that the present program structure is one that causes systemwide goals to tained, even though some goals may be more expensive than others.

Another important value of determining a program structure is that it provides the basis for ing together all of the elements of accountability. A program structure will permit display of ctives showing the costs of programs working toward attaining them, and evaluation data by ram. Sub programs or activities can be analyzed or compared with others in different areas. ifically, the program structure should: (1) display information important to decision-making t the use of resources, and (2) establish a data base that will permit cost effectiveness sis within each program. Each of the program structures purposes can be accomplished by olishing a classification scheme that groups the organization's activities according to the ctives that each activity serves. Within the resulting taxonomic framework, information can rought together on resource requirements, cost outputs, and benefits of all the activities ed on by the organization.

ram Analysis

Community colleges clearly differ in typical existing program structure from the four-year raduate institution. These colleges are generally organized by discipline and their accounting edures are related to degree programs. The community college addresses many student needs are unrelated to the acquisition of a college degree. In addition, support services assist all plines, as well as counselors and administrators. New programs are frequently added to meet needs in the community. The following example is an "activity-centered" program ification structure typical of many community colleges. It is used by Coast and other fornia community colleges for the collection of cost data to be allocated to certain activities gned to further instruction in the community colleges. This kind of "reporting" is virtually a isite for any examination of program structure. If costs can be examined on this or some ar classification of activities, there is a framework for display of data showing costs per ram. The "base case" assessment affords a display of existing programs against which we can our systemwide objectives to determine which programs are addressing which objectives. re this can be done to advantage, however, some sort of basic indicators will be established ach objective so that it is possible to measure the degree to which the institution is successful ttaining objectives. These "indicators" are relatively simple to derive from the objectives olished, and, once established, they lend the kind of specificity that is required in most nitions of the term "objective." Working from established systemwide objectives, the

nning team can determine objective indicators. Selecting, for instance, the following objective om those established by Coast, the planning team might create several indicators for easurement:

Systemwide Objective: to enable students to get their first two years of higher education at low cost, and be able to transfer smoothly and successfully to a four-year school.

ere are two major guidelines in this objective: "Low cost" and "be able to transfer smoothly d successfully." Here are sample indicators that might help determine if the requisites of low st and ease of transferability were being met:

dicators: 1. $\frac{\text{number who get in four-year school of first choice}}{\text{number who desire to transfer}} = \text{expressed in percentage}$

2. $\frac{\text{average F T E student cost of instruction}}{\text{national average cost in two- and four-year public colleges}}$

3. $\frac{\text{number actually transferring to four-year colleges}}{\text{number completing transfer requirements}} = \text{expressed in percentage}$

4. $\frac{\text{number of credit hours accepted}}{\text{number of credit hours given}} = \text{expressed in percentage}$

Each existing program, whether instructional or support, will contribute to one or more of e overall institutional objectives established. Each objective has one or more performance dicators to aid in measuring the degree to which it is being attained. Obviously, programs ntributing to these systemwide objectives will need to have their own program objectives easured. These should strongly suggest specific activities in the program that will clearly help ich the level of performance indicated for the various institutional objectives. The setting of ogram objectives is the most direct answer to the key questions of accountability: "Where do want to go and how do we get there?" In order to make the establishment of program jectives meaningful and to permit later program analysis, priorities will be set among them. aluation, which subsequently enables those in the program to see how well they are attaining jectives, will permit the possible revision of priorities or the addition or deletion of certain ogram objectives.

When the first program objectives are completed, they will be reviewed by the planning

n. Planning team members have participated in one or another of the "objectives" workshops , so, should be qualified to review these objectives for the criteria specified. It will be ortant for the planning team to be as generous as possible in this first review. Subsequent sions will improve the objectives, and care should be taken to preserve a positive attitude in f members, many of whom will be writing objectives for the first time. Once the planning n decides a particular set of program objectives has reached a minimum level of acceptability, will recommend them to the board of trustees for approval. It will be helpful to have the rd take the time to approve each set of objectives separately. Staff morale in the programs re objectives are accepted, and staff motivation in the programs still developing objectives, uld both be significantly improved.

The development and approval of program objectives is, of course, probably the single most ificant step toward making an educational institution accountable. However, when resources matched against budgeted items designed to meet these objectives, there is likely to be too resources and too many objectives. Very likely, the systemwide objectives reflect the litional expectation of citizens that schools are responsible for all of their students' moral, cational, and cultural development. Educators often validate this assumption by overstating ir objectives.

It will be necessary to establish priorities among the objectives developed for programs. The gram participants will have the first opportunity to attempt this difficult task and should be to take advantage of the priorities previously established among the institutional objectives. urally, some resistance will be encountered. Budget cuts under previous budgeting techniques e been made arbitrarily by the pesidents or chancellor. Now the planning team will be making ommendations to the chancellor for submission to the board of trustees based on its analysis rogram efforts to meet institutional objectives. Some competition will obviously result. The antage gained is that the decision-making process for the allocation of resources will: (1) be ed by a team representing all staff, and (2) be based on the merits of each program's efforts ontribute to the attainment of common institutional objectives.

Again, it will be necessary not only to set priorities among program objectives but also to rmine some commonly acceptable bases for evaluating the degree to which those objectives attained. Those ranking high in priority will likely be those to which greater resources are cated, and therefore, particularly significant in the district's efforts to be accountable.

## Evaluation

Evaluation will be even less popular than setting priorities. Staff members resist assessment, frequently legitimately, because of poor evaluation criteria or the inability to measure the effects of certain learning activities. What is helpful in overcoming these objections is common agreement on the methods of measuring success in meeting the program objectives. As previously discussed, each systemwide objective has "performance indicators" which help to measure the degree to which the institution is reading each of its objectives. It is possible to determine similar performance indicators for program objectives.

To begin this process, it will be helpful to gather as much available evidence as possible. Test scores, records of student attainment of particular learning objectives in a class, the statistics as to the number of transparencies made, syllabi printed, purchase orders processed, or even meals served can all be shown to contribute toward reaching properly stated performance indicators. However, it is better to reach common agreement on these indicators among the program staff members and the program directors than to have them established by the planning team or the program director alone. Consultants provided by such organizations as the Battell Research Institute of Columbus, Ohio; the Rand Corporation of Santa Monica, California; or Government Studies and Systems of Philadelphia, Pennsylvania, can help considerably in this regard with workshops for staff and planning team members.

Whatever indicators emerge, it will be preferable to monitor progress toward their achievement during the academic year. Program staff members will establish, for each program, when and how often this should occur. There should be sufficient evidence available no later than the time that decisions will be made regarding the allocation of resources for the next year's budget. Checking on progress during the year, however elementary the process, will permit adjustments to be made in activites that are not working successfully. And the summative evaluation will enable planning team members to be better informed when making decisions regarding the allocation of resources for next year.

Who, then, are we suggesting should evaluate? Everyone who is part of a program should have an opportunity to participate. Staff members will be encouraged to develop techniques for self-evaluation. Program directors will monitor progress toward meeting performance indicators developed within their programs, and the planning team will analyze the evidence provided it at the time of allocating resources. In addition, commercially prepared performance tests such as nationwide reading or mathematics achievement tests are, of course, available. They,

nfortunately, do not reflect local conditions and do encourage the mechanical process of eaching to the test" and probably should not be used. It is likely that instructors or support aff members will not accept imposed standards of measurement any more readily than imposed bjectives. Whatever indicators are eventually utilized, it is extremely important that the valuation system result from a cooperative effort.

rticipative Budgeting

The participative approach to budgeting at Coast will proceed in the following manner:

a. The planning team, consisting of administrators, program coordinators, and faculty is given the responsibility for drafting the overall budget for the college. This group is given a thorough orientation in the college's budget, including past expenditures, expected revenues, and constraints imposed upon the expenditures of various funds.

b. Those individuals responsible for the various programs will assume the responsibility for organizing their particular budget requests. Alternative levels of funding are requested for each program, along with a delineation of how the different levels of expenditures are expected to contribute to the accomplishment of program objectives. Program coordinators work with their staffs in drafting program budgets.

c. The planning team will proceed to match the budget to the program requests in an iterative manner. A "first-cut" will be made at allocating the budget to the various programs. Adjustments will then be made until a satisfactory match between budget requirements and estimated revenue is achieved. Particular levels of expenditures for the various programs are selected on the basis of systemwide objectives ("Top Down") as well as demonstrated need ("Bottom Up"). A high degree of communication between the planning committee and the program coordinators is anticipated throughout this process.

d. After the overall budget is organized, the planning team is expected to make its recommendations to the chancellor for submission to the board.

As with participative planning and participative programming, participative budgeting is a me-consuming process. One major obstacle in the process, of course, is the difficulty in btaining agreement among the many different individuals participating in the process. It is likely at the majority of the individuals will emphasize the importance of their own particular

rograms or program elements, regardless of the specific systemwide objectives that have been stablished.

This proposed approach to budgeting should result in definite benefits for the district. First, he budget is linked to programs in a rational and systematic manner, which should lead to a reater likelihood of accomplishing program objectives and, in turn, systemwide objectives. A econd and equally important benefit is that administrators and faculty will be working together s a team in relating budget to programs.

articipative Evaluation

The Coast District has yet to move toward the kind of evaluation necessary in implementing ny management objectives program. It is anticipated, however, that it will involve several ctivities and components.

A major requirement for implementing a management by objectives system is the stablishment of an information system. The information system is used in collecting, analyzing, nd disseminating information for use in evaluation and decision making. Such a system might be ery simple in design (and require only manual operation) or be quite complex (and require the se of a computer), depending upon the size and needs of the college or district. Feeding into the nformation system should be two broad classes of information: (1) details of the plans, and (2) escriptions of actual accomplishments. The details of the plans would inlclude program bjectives, descriptions of programs and program elements, and budget allocations. Descriptions f actual accomplishments are obtained from faculty, administrators, students, and the general ommunity by systematically surveying their perceptions of actual accomplishments. Also ncluded should be any objective data related to actual accomplishments, such as student test cores and records of student performance (with the stipulation being that these data are related o program objectives).

Evaluation will be carried out by comparing actual accomplishments with desired outcomes. aculty and administrators will need to answer the following kinds of questions: (1) Which bjectives are being achieved? (2) Which objectives are not being achieved? (3) What factors seem o be contributing to the success in accomplishing certain objectives or to the failure in ccomplishing other objectives? and (4) What should be done to improve future performance? As result of this continual evaluation, modifications might be made in the objectives, in the means f achieving the objectives, or in the budget allocations.

This process should be a constructive approach to evaluation. During the evaluation process, it will become clear when objectives are not achieved. The primary emphasis, however, will be placed upon reducing discrepancies between actual accomplishments and the desired outcomes in order to improve student learning rather than on individual accomplishments or failures. This is the theory behind the management by objectives approach being implemented over a three-year period in the Coast Community College District. There may be many adjustments necessary as theory becomes practice, but clearer goals for the colleges and more effective and efficient educational programs for students should be the result.

## Summary

This model of humanistic management being implemented in the Coast Community College District is not proposed here as something in addition to what college administrators are now doing, but is proposed as another way to perform their jobs. It is proposed as an alternative to present management practices.

Humanistic management calls for a special type of leadership in the educational system. It requires leaders who are effective human beings, who have a good grasp of science-based management, and who are able to bring about genuine cooperation among all groups in the educational community. This is a big order, but the need for accountability measures and the importance of the educational enterprise demands it.

The effective application of humanistic management should produce a number of benefits for a community college:

First, the use of management by objectives should have a liberating effect on the entire college. Mystery, confusion, and uncertainty can be replaced by understanding, open communication, and a rational approach to decision making.

Second, the college should be able to demonstrate to the entire community that it is being accountable. It demonstrates this accountability by clearly communicating its objectives, by systematically investigating alternative means for achieving the objectives, by allocating its budget on the basis of clearly established objectives, and by reporting to the community the results of evaluation and plans for improvement.

Third, humanistic management can show the democratic process at its best. Here we must

agree with Erich Fromm when he says: *"Proposing methods of activation by participation aims at the revitalization of the democratic process. It is based on the conviction that American democracy must be strengthened and revitalized or it will wither away. It cannot remain static*

## CHAPTER V

## MANAGEMENT BY OBJECTIVES AND FISCAL PLANNING

### Overview

Most efforts at improving the art of managing higher education have not yet integrated fiscal and academic planning. The many planning and management tools developed by the National Center for Higher Education Management Systems (NCHEMS), for example, have been directed at analyzing utilization and cost of college resources. Only recently has the center begun to specifically explore the difficult area of outcomes. The center has not yet developed tools for simultaneous analysis of outcomes or benefits and the costs of alternative college operations. Many efforts at implementing planning, programming, and budgeting systems in higher education have not been successful because they fail to provide for this integrated treatment of planning problems. In traditional fashion, these efforts have been directed to the less difficult, though still staff-consuming, task of identifying program costs.

Too often, academic planning is carried on without regard to cost implications or operating constraints. Carefully developed academic plans are frequently termed "wish lists" and discarded without examination of possible alternatives. At the other extreme, academic planners may restrict their activities unduly by imagining fiscal constraints which, in fact, do not exist. Symptomatic of this is development of only those plans and approaches that are "fiscally realistic." In such situations, the full range of innovative approaches to community college education, constrained only by delivery system technology, may never be completely developed.

Fiscal planning often proceeds without regard to the subtleties of academic planning. An extensive exercise in setting and developing instructional objectives is wasted if, due to fiscal constraints or efforts at "cost minimization," plans are rejected without further analysis. More useful planning results when both costs and results of only partially attaining objectives are examined. In this way, analysts explicitly convey trade-offs between results and dollars among policy alternatives to policy makers.

The approaches to management by objectives reported in Chapters III and IV suggest that even existing approaches to management by objectives may not provide the comprehensive

benefit-cost analysis needed for college planning decisions. The "institutional objectives" approach utilized at Mt. San Jacinto provides for examining costs per unit credit of enrollment or attainment. The development of specific course objectives and measurement of student attainment then provide a reasonable proxy by which potentially useful cost-benefit analysis may be conducted, particularly for evaluting program effectiveness. This, however, does not provide an explicit mechanism applicable to the necessarily before-the-fact context in which planning must be carried out. These data do, however, provide a basis for examining alternative instructional strategies and selecting those preferable – an essential element of academic planning. The "participative" approach of the Coast Community College District calls for analysis of college resources needed to meet program objectives, thus facilitating decisions about alternatives. As yet, however, specific procedures have not been developed for such analyses. Planning, in contrast to the budgeting process described in Chapter III, frequently proceeds without known cost constraints. The amount of funding eventually forthcoming may well depend upon the persuasiveness of planners presenting program alternatives for meeting objectives.

In addition to questions of "how much" or "how many" college programs for how many dollars, there is also the question of "who" may benefit from such programs. This concern is normally articulated in terms of access or equal opportunity for community college education. While there has been great concern about who is afforded access to college programs, the issue is seldom integrated explicitly with planning of programs and alternative ways of delivering those programs to the community.

This chapter relates techniques for developing objectives to fiscal planning, emphasizing programs and access, i.e., benefits and equity. A variation of the usual cost-benefit analysis is suggested for purposes of explicitly treating qualitative as well as quantitative college objectives. This information and analytical framework relies on specified objectives developed under management by objectives. Preference orderings of feasible alternative program and resource mixes are constructed. In this way, the basis for comprehensive planning is developed to conduct academic and fiscal planning simultaneously and provide community college decision makers with relevant information upon which to base rational decisions and evaluate consequences.

Information systems development and analysis require college resources which themselves are expensive. Consequently, many community colleges will probably want to engage in ad hoc decision analysis rather than develop a very expensive program budget, much of which is not used during each planning cycle. Indeed, many small colleges may be unable to commit the capability

required to maintain information systems needed for ongoing program budgeting. These sam colleges, however, may develop information sufficient for effective management by objective efforts, integrated as needed with fiscal planning.

The suggested ad hoc analyses relate in a practical way to decisions which allocate an deploy college resources to meet desired objectives. These decisions may be required annuall (salary decisions), more often (purchasing and inventory decisions), or less frequently (ne program decisions). Whatever the frequency, college staff conducts such analyses as needed fo specific decision problems.

In order to deliver community college education effectively, there must be accurat assessment of those community educational needs and preferences that are within the college capability. There may then be definition of college objectives for meeting needs and the require management decisions can be identified. Next, design of feasible delivery systems and fiscal plan takes place. Finally, there is decision and implementation. This approach encompasses the bas for later evaluation and the full cycle of planning, programming, budgeting, implementation, an evaluation is accomplished.

Management by objectives helps relate these efforts and aids in improving communit college management capability. Indeed, management by objectives appears to be one of the fe (possibly the only existing) tools available to facilitate benefit-cost analysis in communit colleges. The greatest obstacle to such analysis is the inability to measure all of the outcomes o results of college programs in the same dollar terms that measure college resource us Management by objectives avoids such difficult measurement problems in a way that sti provides college decision makers the information needed for effective planning and programmin decisions.

## Proposed Approach for Integrating Academic and Fiscal Planning

To be useful, an approach to integrating academic and fiscal planning should overcome th output-measurement problem, include concerns about student access, and recognize the need fo simple, explicit presentations to managers who have limited time and information at the disposal. To do this, we suggest a ranking approach incorporating several tools basic t management by objectives. This approach modifies traditional cost-benefit analysis and rank alternatives according to three criteria essential to community college decision making:

1. benefits or outcomes (sometimes termed program quality),

2. costs, and

3. access.

Correct planning solutions result only from simultaneous consideration of all three criteria. The decision is clear if one alternative is preferred to others according to both benefit and cost criteria and satisfies the access criterion as well. Unforunately, the three criteria are not necessarily always compatible. For example, it may be that increases in college effectiveness (benefits compared to costs) are obtained only at the expense of decreasing access, or vice versa. Decisions should be constructed so as not to force decision makers to subjectively weigh the access criterion against the effectiveness criteria.

Suppose, for example, that costs and funding are fixed before-hand. It's possible then that improvements in student access are obtained only at the reduction of benefits or outcomes per student served. Ideally, alternatives should be constructed so as not to force decision makers to make such trade-offs. Such choices, if necessary however, should be explicit, rather than implicit, as is so often the case in existing planning efforts.

If costs are fixed, college managers should attempt to satisfy as many desired objectives for benefits and access as possible. Given fixed program objectives for benefits and access, managers should select the least cost means of meeting those objectives. Frequently, however, major planning decisions do not have specific cost constraints. Therefore, a useful decision model should handle problems in which values of all three criteria may be varied.

In the following, we describe

1. how college managers may arrive at a decision once the three rankings of college operating alternatives are developed, what the decision means, and why it may differ from that thought to be preferable;

2. factors important in estimating costs for each alternative – developing a cost ranking;

3. use of management by objectives to assess possible outcomes from each alternative – developing a benefit ranking;

4. factors important in analyzing access and estimating each alternative's impact on access to college programs afforded various subpopulations of the community – developing an access ranking; and

5. a simple, hypothetical case example in which this approach is used to arrive at decisions about a community college program for the aging.

## Reaching a Decision

Suppose staff has completed analysis of several college operating alternatives, designated A through E, each developed for the same set of college programs but satisfying program objectives in different ways. Resource requirements, probable costs, expected results and accessibility of the program alternatives to students are analyzed for a multi-year period. The following rankings are presented to decision makers to consider:

| Alternative | Benefits (Most preferred: 1, least preferred: 5) | Costs (Ratio to lowest cost alternative) | Access (Most preferred: 1, least preferred: 5) |
|---|---|---|---|
| A | 3 | 1.39 | 5 |
| B | 2 | 1.30 | 2 |
| C | 4 | 1.35 | 1 |
| D | 1 | 1.00 | 4 |
| E | 5 | 1.40 | 3 |

Alternatives A and E are discarded because they are weak under all three criteria. Staff estimates alternative D will result in relatively high program outcomes (benefit ranking of 1) at low cost (it is the least cost alternative) for those expected to enroll, but reduces access for several community subgroups. If alternative D better satisfied the access criterion, it would likely be selected. Alternative B ranks high (2) in providing access and is the next preferred alternative according to benefits and costs. Additional thought on the part of both analysts and decision makers seems required. What happens if D is modified to satisfy the access criterion? If the resulting cost of "modified D" does not exceed 1.30 and the estimated benefits ranking is not disturbed, modified D appears preferable. However, what if the cost of modified D is pushed over the 1.30 level of B or the benefits ranking for D revised so that it is no longer the most preferred? Or, what if D cannot be modified to do a better job in providing access? In each of these cases, the decision maker must decide if satisfying the access criterion is "worth" the decrease in

'ectiveness (benefits less costs) implied in choosing B, rather than D.

The other alternative that might be considered, in view of its "showing" with regard to the cess criterion, is C. Again, this consideration requires a subjective trade-off among the three teria based upon the judgment of the decision maker. No approach can remove completely the ıbiguity present when access, as well as effectiveness, is relevant. Subjective judgments by cision makers are still required; particularly since each of the three rankings is in different easurement units. The rankings, however, indicate explicitly points where conflicts develop ıong the criteria and the approximate value (s) decision makers implicitly assign to access and nefits when making a particular choice. If the college educational process is a worthwhile vestment, benefits exceed costs and the benefits ranking carries more weight than the cost nking.

This approach accomplishes two things. First, academic (benefit) and fiscal (cost) planning ccur simultaneously as they must for optimal decision making. Second, access to community llege education becomes explicit, in contrast to its current status: an implicit and ambiguous ement to which policy makers frequently pay little more than lip service. The approach would be ed primarily for major decisions about college policies and programs, particularly where ecific policy objectives are not yet selected. The approach may be used also for minor decisions ter some modifications.

Decisions about internal or technical efficiency should be distinguished from those about fectiveness, a subtle but important difference.* A community college may teach drafting (or ıy other program) in the most efficient manner possible, using the latest media and an optimal ix of faculty and instructional aids, and be internally or technically efficient at teaching afting. However, if few students want to take the program and there is no demand for aftsmen in the community, region, or possibly even throughout the state, then the college is ot effective, even though technically efficient.

Effectiveness, by contrast, requires the additional step of determining that combination of ansfer and occupational individuals that is "best" for society. Best, in this sense, combines (1) e educational preferences of individuals in the community, and (2) the apparent needs of the

*The term effectiveness is used to describe what is normally defined as "economic fficiency." This includes serving the educational tastes and preferences of the community as well conducting college activities in a technically efficient fashion.

community and society in general for the two kinds of education. Suppose that a management by objectives exercise of needs assessment, objective setting, and staff analysis indicates that roughly equal numbers of college-educated occupational and transfer individuals satisfy both preferences of individuals and needs of the community, region, and state. Of a group of 800 students, education of 400 transfer and 400 occupational individuals would then be both technically efficient and effective. Education of 600 transfer and 200 occupational individuals would not be effective even though technically efficient since the college is conducting more transfer and less occupational education than the community prefers or needs. Production of 300 transfer and 200 occupational individuals wouldn't be either technically efficient or effective.

College managers should consider effectiveness, not technical efficiency, when deciding which alternatives to pursue. The criterion of effectiveness cannot be satisfied (except by accident) unless the needs and preferences of the community for community college education are well articulated. Needs assessment and specifying objectives within management by objectives provides this articulation. Indeed, it is doubtful that the effectiveness of a community college may be determined without resort to the basic initial steps of management by objectives or similar procedures emphasizing community needs and preferences.

Even if policy makers determine how their college may be effective, however, this is only a part of college objectives. Colleges also extend and redistribute economic and social opportunities to individuals by providing them access to an education. This objective is termed providing equal access or equal educational opportunity. Low student charges and liberal admissions policies extend college educational opportunities to individuals who, for various reasons, would not have such opportunity if community colleges did not exist or existed in a different form. "Open door" community colleges stress equal access by admitting students without employing the usual barriers of age, previous academic performance, income, and location. Consequently, community colleges face considerations of guidance, counseling, remediation, and costs of attendance unlike those of "four-year" institutions.

Equal opportunity is not subject to the usual effectiveness analysis. Rather, it is analyzed by less precise, but equally important, equity conditions. These are measured by improving access to college programs for particular socioeconomic subpopulations of the community where such opportunities did not exist previously. This requires explicit recognition of varying individual needs, preferences, capabilities, and backgrounds. Objectives for access relate not so much to the effective handling of certain numbers of individuals, the "how many"; but rather, to the equitable handling of certain kinds of individuals, the "who."

Efforts at improving college planning and decision making need to recognize not only whether or not community college education is provided effectively but also by whether or not it is provided equitably to all individuals of the community. Decisions are complicated if staff experts can't present analysis and recommendations so that lay boards of trustees who set policy may understand the options available. Resource allocation decisions may not be based on reality, but rather the decision maker's perception of reality as he interprets the information. The decision is then so based and implemented with the result that perception becomes operational reality.

Feasible options must be presented to decision makers in simple, explicit, and jargon-free terms. However, data for planning decisions are estimates and projections, seldom, if ever, certain. Thus, another complication, uncertainty, arises. Most individual decisions are made under some degree of risk or uncertainty, whether the individuals be chief executive officers, lay board members, or voters. In each case, there are combinations of anticipated possible conditions and college policy alternatives of courses of action, each of which may be assigned a value by the decision maker. This assigned value is analogous to the benefit-cost calculations discussed elsewhere in this chapter. The decision maker or analyst assigns a probability to each possible condition. Most community college decisions are made under some degree of uncertainty depending on how staff and policy makers feel about a condition actually occurring.

## Ranking Alternatives According to Cost

Ranking alternatives according to cost, from lowest to highest, requires projections of various kinds of costs, both public (to the institution) and private (to the individual). The projections depend upon the length of the planning period and care must be exercised to include only those costs incurred during that time. Cost ranking proceeds only after alternatives have been developed and their resource requirements defined. Various aspects of costs with which analysts need to be familiar when examining alternatives include the following:

## Public Costs

A college's public program costs rely on estimates of resources required for college operations and the market prices applied to those resources. The most obvious program cost, of course, is that for current operating activities of instruction and community service. For most community colleges, annual operating costs per student exceed $1,000. By contrast, capital expenditures for instructional and community service facilities may be as little as $200 annually

per student when the life of facilities is considered. Although they cost less, the facilities investments, particularly in the implementation of new programs, is important.

A seldom considered kind of public cost is due to the presence of college programs, and is borne by the community in general: (1) possible increases in local tax rates due to removal of facilities from the potential local tax base; (2) increase in police, fire, and other local services brought about by the presence of the college program; and (3) the implicit costs of the time and effort of community individuals in the promotion of college-related objectives, ranging from voluntary teaching to the expense-paid efforts of individuals who spend inordinate amounts of personal time. Included is time spent responding to questionnaires, participating in planning committees, and promoting programs and/or funding proposals.

## Private Costs

Accurate cost estimates require consideration of private costs as well as the public costs of college attendance. Private costs, the major portion of total college costs, include: (1) the value of earnings and leisure a student must forego while he is enrolled; and (2) those direct costs such as tuition and fees, books, supplies and materials, transportation, additional or perhaps more expensive housing, etc., which an individual would not incur if he were not a student. Normal costs of room and board and other so-called out-of-pocket living expenses are not usually attributable to community college policies or programs since individuals would incur such expenses if not enrolled. Typical community college information systems needn't contain data on private costs. More likely, such costs are developed in relation to specific alternatives in an ad hoc fashion.

## Fixed and Variable Costs

The costs of any alternative should be the "opportunity costs" resulting from its implementation. Opportunity costs are the value of those activities or opportunities that must be foregone to implement an alternative. Such costs consist of two basic components: (1) variable costs, and (2) fixed costs.

Variable costs are generated by resources whose quantity can be adjusted or changed during the planning period. Fixed costs, by contrast, are generated by resources whose quantity cannot be adjusted during the planning period. Whether resources are fixed or variable depends upon the length of the planning period. For the typical one-year operating budget plan, most of the

community college's physical plant is fixed as are certain staff, due to long-term contracts or other semi-permanent employment arrangements. Other staff, particularly those under part-time or temporary employment provisions, are a variable resource. For a longer five-or ten-year planning period, most resources are variable with the exception of that physical plant and equipment inherited from a previous planning period. Cost analysis must include both fixed and variable resources. Costing the variable resource is easier than the fixed resource because the latter's period of service extends beyond the planning period. Generally, the amortization cost of the fixed resource should be used; i.e., that portion of its total acquisition cost correctly charged against the planning period given the life of the resource.

Total, Average, and Marginal Costs

Total, fixed, and variable costs data allow derivation of marginal and average costs. Cost rankings of decision alternatives generally use total data. However, some planning problems need marginal and average data as well. For example initial equipment and other fixed costs in drafting may be extremely expensive, while the variable costs of adding additional students to the program are minimal due to increasing sizes of course sections, and perhaps because those in the drafting program may not extensively use library resources, student services, or other supporting services at the college to any significant degree. The average cost for each student is high while the marginal cost of each additional student is low. As students are added to the program, the impact of the fixed cost becomes less important until the two costs (marginal and average) are equal. College managers usually must make decisions about increasing or decreasing program size at points where marginal and average costs are not the same. It is essential to know the approximate difference between the two measures, even though it is more difficult to measure the marginal or incremental cost.

In contrast, a decision to establish or terminate a drafting program is normally based upon total rather than either average or marginal cost and benefit data. Decisions on efforts to achieve broad college objectives such as enhancing the educational experiences of the elderly would also use total cost data.

Cost Units

The choice of units in which costs are measured depends largely upon the problem. If programs involve only instruction and not other elements of the college operation (the extreme case), student credit or contact hours are useful unit or quantity indicators. Proposals involving

both instructional and noninstructional costs and perhaps also utilizing community facilities are cast more appropriately in terms of costs per full-time equivalent student or per head county student, the former having been adjusted from the latter for the extent of student part-timeness.

Units, such as costs per degree or certificates granted, popular in four-year institutions may be misleading for community college planning. Even the cost per completion, with completion defined imaginatively, is likely to miss the mark since even those failing to complete a program probably benefit to a certain extent. Excluding them distorts the cost-benefit analysis by understating the benefits.

It is possible, however, to use the student credit unit as a measure of output so long as the credit unit is not defined in the traditional sense. For example, Mt. San Jacinto College allows partial credit for most courses offered. A student may earn one, two, or three units in a traditional three-unit course by achieving certain measurable and unmeasurable objectives specified by the instructor. The use of unmeasurable objectives generally incorporates the affective, as well as cognitive, elements of college instruction. A student who masters one-third of the course content receives appropriate credit, rather than nothing as he would under traditional credit and grading procedures. Thus, for Mt. San Jacinto, the credit unit measures output since it is defined in terms of the skills and attributes added to students taking courses.

## Direct and Indirect Costs

Another popular but sometimes misleading distinction is that between "direct" and "indirect" costs. One definition suggests those costs easily attributable to college programs are direct while those more difficult to attribute to the program – requiring proration or allocation – are indirect. The criterion is, thus, the energy of college staff. Another definition labels instructional costs as direct and noninstructional costs as indirect. This apparently refers to classroom expenditures, since the library, counseling, or admissions and records efforts all have their own direct and indirect expenditures. The direct-indirect definition appears to be a function of the particular planning problem and of general use primarily for certain institutional funding situations, such as the Vocational Education Act program, where federal grants provide additional overhead funding based upon indirect cost calculations.

## How Costs Differ Among Alternatives

A cost ranking requires estimates of how costs differ (1) from one program alternative to another, and (2) from year to year. Private costs of foregone earnings and opportunities, while

the major share of total cost, may vary little from one alternative to another, though sometimes a student may have to forego income and/or leisure more under some alternatives than under others. Differences in private costs are more likely observed for transportation outlays, parking fees, housing, and extraordinary subsistence.

Some proposals may change private costs due to changes in public costs. For example, the tendency to place more reliance upon tuition and fees when public funds are short does not change total cost, but simply shifts the burden. Other shifts are more subtle. Regional planning and location of certain programs may result in saving college funds by eliminating duplicate, high cost, low enrollment programs. However, private costs for students may increase because they must commute farther or move from their parents' home to attend a program given by a college that is in the region but not within commuting distance. Here college (public) costs decrease and private costs to the student increase. Such cost shifts differ from program alternatives which increase the technical efficiency of the college by decreasing the total resources and funding required to turn out a given number of desired outcomes. Increased technical efficiency may come about for various reasons, including improved educational technology resulting from new methods, better organization of the college, or increased scale of operating activity.

## Cost Prediction

Planning requires cost prediction. Most efforts begin by estimating future enrollments, applying enrollment: faculty ratios and faculty: supporting staff ratios, than applying salaries and wages to resulting staff counts. Facility and equipment utilization standards based upon the number and mix of students in various programs usually provide the basis for facility and equipment estimates. In small colleges, these estimates usually are done by hand. However, these and other colleges may find it useful to employ one of the several cost simulation models now available. These models, normally computer driven, estimate resources required under differing assumptions about operating policies, i.e., student:faculty ratios, student:space ratios, etc.

While these models are helpful, several problems remain. Total future enrollment must be estimated. Even the models with student flow components deal only with movement within the college. The user must provide data on rates at which students move. Enrollment growth has slowed and attendance patterns for both traditional college-goers and formally noncollege-goers are changing. Thus, estimating total future enrollment and the character of first-time enrollees is perhaps the most difficult task faced by college planners. In addition, none of the simulation models include private costs which may vary among planning alternatives; nor are the models constructed to handle future changes in college organization or nontraditional delivery systems in

which students' attendance patterns are quite different and noncollege facilities used to a much greater extent.

## Ranking Alternatives According to Benefits or Outcomes

This section describes the various kinds of college benefits or outcomes and the problems of measuring such outcomes. Specified objectives, developed in the management by objectives approach, appear to be a promising way to solve many measurement problems. Specified objectives are useful in constructing the qualitative ranking of alternatives according to expected outcomes.

## Types of Benefits or Outcomes

College education "adds value" to individuals in the way of skills and capabilities necessary for participation in society and for effective performance as members of a labor force serving that highly technological society. This value added – to the human capital of specific individuals – results in outputs or benefits accruing over a lifetime both to the individual who received the education and to society in general. Benefits accruing solely to the individual are termed "private," those accruing to all individuals in general are termed "social," "collective," or "public."

Additional lifetime earnings, social and cultural amenities not available to those without college education, and the personal satisfaction derived while attending college provide measures of private benefits. Social benefits are less definitive, but thought to include: improvements in communication which facilitate political and market processes; reductions in public costs for crime prevention, welfare, etc.; increases in civic, charitable, and cultural participation; and improved formal education of children by better-educated parents.

A third category of benefits are also public or collective, but do not result from formal instruction. Rather, these benefits accrue to a community from the mere presence of the college program(s) as generally distributed economic and social benefits to all in the vicinity of college programs.

## Problems of Measuring Benefits

Measuring benefits or outcomes in a valid and timely way is a major difficulty for college planning. Additional lifetime earnings which result from a college education have been measured

with some success. Generally, however, no quantitative measures have been developed for the other components of private benefits nor for virtually any of the social benefit components. Many of these benefits accrue both to individuals and to society over the entire lifetime of individuals who attended community colleges. Even if quantitative measures or indices were available, the job of gathering statistics would take so many years that results wouldn't be available for decisions which must be made in the near future. Therefore, indirect or "proxy" measures must be utilized. Such measures concentrate on the notion of "value added," described by the "skills and capabilities" imparted to students undergoing the college program. These proxies have the advantage of being measured during a student's attendance.

There have been numerous attempts at specifying such proxies. Generally, they fall into three categories for community colleges: (1) generalized and specialized development of individual skills and attitudes, the benefits of which are realized largely after college; (2) benefits accruing to students while enrolled; and (3) benefits accruing to the community. Astin (1972) develops a useful format dichotomizing "student outcomes" into cognitive and affective, each measured by behavioral and psychological data. Wallhous and Micek (1973) have produced a similar taxonomy for the National Center for Higher Education Management Systems. Whatever output proxies are used, analyses and decisions must recognize that they are just that: practical, but indirect measures of final output.

## Benefit Prediction

Proxy measures for benefits can be used to analyze and evaluate on-going or completed efforts. For this, they are relative, measuring (1) student development between two points in time, sometimes termed "testing in and testing out," or (2) groups of students in different college settings or even different colleges. Such evaluation is useful for decision analysis. Planning problems, however, require a set of expected benefits or outcomes from the program alternatives to be implemented in the future. The appropriate comparison is between alternatives, not between points in time or between colleges.

The suggested analytical approach produces an ordinal ranking of alternatives according to the expected value of benefits resulting from each. While this requires subjective judgments, the effort is useful if systematically pursued by staff according to ground rules known to and endorsed by college policy makers.

## Using the Specified Objectives from Management by Objectives

Staff may select any number of methods to systematically estimate benefits or outcomes. Student-related benefits or outcomes, for example, are a function of both institutional and student characteristics, both of which are affected in different ways by different policy and program alternatives. The suggested solution relies upon objectives specified in the management by objectives exercise. The management by objectives process establishes objectives for each level of the management hierarchy. These objectives are then used to measure anticipated outcomes and, with greater specification, form a common yardstick against which each alternative is examined. This is a "before-the-fact" estimate of the extent to which each alternative will satisfy, or partially satisfy, the set of objectives. Several techniques for reaching consensus on objectives have been described. Regardless of the techniques used, managers, faculty, the community, and students should agree on the importance of each objective prior to analyzing alternatives.

An objective discussed in Chapter IV was "to enable students to get their first two years of higher education at low cost, secure in the knowledge that they will be able to transfer smoothly and successfully to a four-year school." "Low cost" and "smooth and successful transfer" need greater specification for practical use. Measurable objectives for smooth and successful transfer are suggested to be: (1) the percentage of those desiring to transfer who actually get into the four-year shcool of their first choice, (2) student feelings of security with respect to possible transfer, (3) the percentage of those completing transfer requirements who actually do transfer, and (4) the percentage of credit hours that are actually accepted by the four-year institution.

## The Ranking

Suppose a set of, say 20, program objectives are selected. (The relative importance of the 20 objectives must then be determined, unless each is equally important.) After this, program alternatives are analyzed to determine the degree to which each is expected to satisfy the objectives. Subjective judgments are required, but the process is structured and explicit – each alternative is analyzed against the same set of objectives by the same planners. Some alternatives only partially satisfy certain objectives and the following rankings for benefits or outcomes result from an analysis of hypothetical program alternatives A, B, and C:

| Alternative | Objectives Expected to be Satisfied (of twenty) |
|---|---|
| A | 18.5 |
| B | 16.0 |
| C | 12.3 |

Similarly, specific objectives for costs and access may be utilized when ranking alternatives und those criteria. The desired result, irrespective of method used, is a list of alternatives on a sc from "most preferred" to "least preferred," according to a set of objectives or outcomes a analytical technique for ranking agreed to beforehand by all participants.

## Ranking Alternatives According to Student Access

The third criterion for decision making deals with student access. Similar to benefits a costs, access may be analyzed by numerous techniques. We suggest one alternative, in whi satisfaction is measured by whether a policy alternative increases, maintains, or decreases acc to community college education for various socioeconomic subpopulations in the service ar Other methods may be equally useful, but the factors to be considered will likely be used un any method.

## Community Subpopulations

Several guidelines are available to divide a college's service area into subpopulations community groups. One possible guideline is the properties of the family unit and their effect college attendance. Social-psychological dynamics arising from the family's social-class positi and parents' values and aspirations operate to influence the child's expectations and ambitions. family's socioeconomic status seems to influence all other factors in the question of who goes college; first, economically and second, in terms of the family's values, expectations, ambitio and aspirations for its offspring.

All these factors correlate significantly with housing. Thus, community subgroups could developed as mutually exclusive geographical groups each made up of households wh individuals exhibit characteristics that are relatively homogeneous. Theoretically, one co examine access for each household in the service area, but this is not feasible. Consequently, seems best to hold community groups to a manageable number, perhaps a dozen or less, a analyze access for each group.

Community groups may be aggregations of 1970 census data on "tracts," "enumerati districts," or "blocks" for population and housing characteristics. Other data may be use particularly that generated by city, county, and regional planning agencies.

The suggested access analysis first requires review of the accessibility of community coll services to th various population subgroups. Proportions of potential students fr

socioeconomically homogeneous neighborhoods are identified as being: (1) admitted, and (2) completed specific programs.

The 1970 census contains a question about college level attendance. It should be possible from district enrollment data, to tie enrollees to local addresses aggregated by community groups. Observations on full- or part-timeness, day or night attendance and the distribution of students among programs would then be possible. Constraints that operate within each community group and contribute to above-or below-average college-going rates are identified. For example, is it primarily individual, institutional, financial, geographic, or some combination of the four constraints that causes individuals in community group "x" (not) to take postsecondary education, particularly at the local community college? Are all or some of the constraints more important in their impact on "going" rates in one area than in another?

## Barriers to Access

Any obstacle perceived as a barrier by a potential student is a barrier worthy of attention. Barriers range from the absolute – lack of a college within reasonable traveling time – to the relative – cumbersome admissions procedures. Martyn's conceptual scheme (Martyn, 1966) to identify barriers cites four major barriers: (1) financial, (2) academic, (3) motivational, and (4) geographic.

Financial barriers include both direct and indirect costs to the student such as tuition, fees, book costs, room and board, clothing, transportation costs, and foregone income. Included among the academic barriers are factors of poor preparation and low previous performance in addition to constraints associated primarily with the institution such as the possible cultural biases of the counselors. Other academic barriers such as the impact of high school counseling, college admissions, financial aid and entrance testing procedures, and the reading levels of the necessary admissions forms may all constrain access (Knoell, 1968). Motivation influences attendance through peer group and parental stimulation, recognition of the potential student's past achievements and influence of ethnic community identity. Geographic barriers include actual distances to campus and factors such as weather and topography affecting transportation.

## The Ranking

Community subpopulations are defined and the existing access and barriers identified for each group. Planners then may analyze the possible impact of each proposed alternative upon access for each subpopulation group. Results of this analysis could utilize a matrix in which, for

example, five program alternatives, techniques for delivering college services, are analyzed respect to their impact on each of six different community subpopulations:

Program Alternatives

| socioeconomic subpopulations | A | B | C | D | E |
|---|---|---|---|---|---|
| a | ↑ | ↑ | ↑ | ↓ | ↑ |
| b | ↑ | ↑ | ↑ | ↑ | ↑ |
| c | ↓ | O | ↑ | ↑ | O |
| d | O | ↑ | ↑ | O | O |
| e | ↓ | O | O | O | ↑ |
| f | ↑ | ↑ | ↑ | ↑ | O |

where, a program alternative increases ↑, maintains O, or decreases ↓ access for each of community subpopulations identified.

Thus, alternative A increases access for subpopulation b, reduces access for thos subpopulation c, and has no apparent impact on those in d.

Suppose college managers feel the access criterion is satisfied if an alternative does decrease access for any subpopulation. The following evaluations and ranking result from above example:

| Alternative | Satisfy Criterion? | Ran |
|---|---|---|
| A | no | 4 |
| B | yes | 2 |
| C | yes | 1 |
| D | no | 5 |
| E | yes | 3 |

Alternative C seems preferred from the perspective of student access. B is only slightly less preferred, the difference being that it does not improve access for subpopulation c (and C does). B and C have similar impact upon access for all other subpopulations.

Like the benefits analysis, this effort is subjective but useful if explicit, structured, and conducted in a consistent fashion. Questions of access to community college education normally include both the possibility of attendance (the college-going choice), and the kinds of programs available once the individual enrolls. In this approach, however, program availability is examined in the benefits analysis so factors influencing the individuals' college-going decisions are the important factors for access.

## A Case Example: Programs for the Aging

A simplified and hypothetical case example illustrates the ranking approach. Staff performs the required preliminary analyses and needs assessment, programs a manageable set of feasible alternatives, analyzes these according to the three criteria (benefits, costs and access) and presents the result to college decision makers. The choice may not always be that expected, as depicted in the example.

Community College X explores initiating a new program for the elderly residing in its service area. No such programs exist currently, but college staff working with local planning agencies estimate that 65-year-old and older citizens will increase from 10 per cent to 30 per cent of the area's population during the next three decades due to the attractive housing and climate of the area. The 50 to 65-year-old age group, many of whom are early retirees, is expected to increase similarly. Most of the elderly are scattered throughout the community's urban area, although an increasing number reside in mobile home parks, condominium developments, convalescent homes and hospitals, and other types of senior citizen developments. It is anticipated that most of the increase in elderly population growth will be located in such developments.

## Needs Assessment

Assisted by elderly volunteers, staff completes a survey of the educational needs and preferences of the elderly in the area, finding interest in a wide range of possible college programs. Desired programs are hobbies, recreation, personal development, certain avocations, pre-retirement guidance, and needs-oriented human services such as transportation and employment opportunity information. Courses most frequently requested cover basics such as

preparing income tax returns, health for the aged, consumer concerns, retirement benefits for the aged, and use of leisure time. Courses with a credit option are preferred and there is little interest in degree programs. Small group activities with considerable student participation are preferred.

## Specifying Program Objectives

Staff and community representatives formulate two dozen specific objectives from information developed in the needs assessment. Several such objectives are clustered under each of the following six major objectives: (1) learning new hobbies, avocations, and recreational pursuits; (2) learning new or missed educational skills; (3) interacting with the younger generation; (4) deriving satisfaction from the joy of learning; (5) combating loneliness and alienation; and (6) feeling useful and relevant. To analyze program access, staff identifies nine groups of community elderly: two living in two large retirement developments; one group in a large mobile home park; and all others distributed throughout the urban area, categorized into six relatively homogeneous subgroups according to housing, transportation problems, age, and general socioeconomics, all highly correlated in each case.

## Programming

Staff takes the needs assessment information, specified program objectives, and advice of elderly representatives from the community to design the following four program alternatives:

a. Instructional courses offered totally at night in otherwise unused classrooms on campus located at the edge of the urban area. Courses are taken from a variety of disciplines, including some already in the catalog plus two dozen new courses specifically designed for the aged. Counseling services are provided though limited.

b. A less extensive program of courses covering mostly hobbies and recreational activities all conducted in community facilities at about three dozen locations, including the major elderly centers.

c. A few multi-discipline instructional courses on campus during the day along with courses in some two dozen community facilities.

d. Similar to "c" but with considerably more avocational offerings on campus, off-campus offerings similar to "c," and an extensive recreation and community service

program conducted at the various centers for the elderly, supplemented by transportation, health, and employment information services.

While many more program variations could be designed, the number is held to four to provide decision makers (in this case, the college board) with a simple but useful picture of the issues involved in a wide range of alternative costs and outcomes.

Analysis and Decision

Analysis of the program alternatives results in the following:

Rankings of
Elderly Program Alternatives

| | Benefits (objectives satisfied of the 24 specified) | Costs (ratio of each to the least cost alternative) | Access (most preferred: 1 least preferred: 4) |
|---|---|---|---|
| A | 19 | 1.00 | 4 |
| B | 16 | 1.20 | 2 |
| C | 13 | 1.25 | 3 |
| D | 21 | 1.60 | 1 |

Alternative A is least expensive due to larger class sizes conducted at virtually no facilities expense. Night programs, need to provide transportation, and lack of community coverage results in A's being the least accessible to potential participants, although a relatively high number of program objectives might be satisfied for those who did manage to participate because of broad subject matter coverage. B is 20 per cent more expensive than A, but provides good access at locations throughout the community. Staff and elderly representatives agree that B would not satisfy about one-third of the desired objectives, particularly improving intergenerational communication and learning new educational skills. Alternative C is less desirable than B under all three criteria.

The most desirable alternative (D) in terms of benefits and access is, as one might expect,

the most costly. Faced with this dilemma, the board has staff develop a fifth program alternative by modifying D to (1) reduce the number of daytime courses by combining several courses resulting in larger class sizes, (2) add several night courses at the elderly centers, and (3) use elderly volunteers as faculty and counselors off campus, reclassifying off-campus courses to be noncredit or credit at the option of those attending. These measures reduce D's expected cost to just 1.30 (i.e., 30 per cent more than that of A). Expected benefits or outcomes from D are increased slightly by the elderly participating as faculty in addition to being students and better satisfying the objectives of combating loneliness and alienation and feeling useful and relevant. The board feels the cost is now feasible and selects D, as modified, demonstrating a high regard for access to programs and program outcomes. The least cost program alternative, A, while attractive in subject content, is not undertaken because it is not sufficiently accessible to the elderly – those it should serve.

While much of this exercise is qualitative and subjective, the process does clearly identify the important issues which, in turn, leads the board to examine the cost-program trade-offs and select a modified and much superior alternative. Further, staff and elderly representatives from the community develop two dozen specified objectives, providing the basis for both planning decisions and later evaluation of actual program results. This facilitates possible reformulation and improvement of future programs for the aged.

## Summary

This chapter suggests a way to treat college planning decisions in a dual context to combine (1) academic and fiscal concerns with (2) college effectiveness and student access. The vexing problem of measuring college outcomes is solved by using program objectives specified during the management by objectives exercise. Needs assessment, vital to community college responsiveness to the educational needs and preferences of its community, is an integral part of the process. Rankings of program alternatives, according to each of three criteria (benefits, costs, and access) are suggested to meet the difficulties presented because college outcomes and the value of student access can't be measured in dollars as are costs. These rankings provide an economical and explicit means by which college managers may examine alternative investments and results to identify the best feasible planning choice. This approach would be impossible or at best extremely difficult without the tools of management by objectives.

## CHAPTER VI

## SUMMARY

The complex and conficting challenges presented by the demands of the public and their elected representatives for more effective accountability, the increasing problem of scarce resources, and demands of faculty and students for increased participation in the management of community colleges have all combined to make effective community college management more necessary than ever before in the history of education. Among major problems to be solved in the 1970's are the problems created by student and public dissatisfaction with results of dollars spent on education, the seeming confusion and ambiguity over college objectives, the frequent inability of the colleges to articulate to the public both the reasons for needs and the outcomes for increased investment in educational programs, and the problem of developing a more integrated educational program while the forces of vested interests and competing demands interact within the college. All of these problems make it essential to find more effective management techniques to help clarify institutional purposes and to unify educational effort.

One technique which has been suggested by a number of authors to help meet some of these management problems is management by objectives. Whether management by objectives will lead to fundamental change or whether it will become another educational fad is currently a topic of great debate. To some, management by objectives holds the promise of a planning tool that will allow for the measurement of the relative success of educational programs, for greater organizational self-understanding and communication, for the uncovering of new needs, and for more effective planning and assessment of innovative educational programs. To others, management by objectives raises fears of an emphasis on the trivial, of a bureaucratic paper-shuffling nightmare, or of system analysts choking all of the intellectual vigor and academic freedom from the colleges.

It has been the purpose of this volume to review the process, progress, and problems of management by objectives as a management technique. A primary thesis of the book is that effective management can be improved by studying the discipline of management, including the major functions of management, the human dimensions of management, and the modifications in management practice imposed by the differing contexts where the management process occurs. A second thesis in this volume is that the context of education is vastly different from the world of

business where much theory and management practice has developed. While the effective educational manager should understand the discipline and theory of management for important insights into effective management practices, the application of management theory to the world of education must be modified to fit the special world of education.

The business management practices used in private industry cannot be superimposed on an academic community. The products of the two environments are different. The product of the education world is less tangible and more diverse, and not easily measured by the return on investment. In business, there is great control over the production process, while in education the raw materials coming to the institution possess a great diversity of student backgrounds, faculty abilities, and community resources. In addition, the tradition of academic freedom and the nature of education make any attempts at imposing uniformity undesirable. The nature of authority also differs between the two contexts, with the business organization generally governed by a bureaucratic hierarchy, and the educational organization geared more toward a combination of the collegial and bureaucratic-participative kinds of authority.

Finally, and most importantly, the two kinds of social institutions exist for different purposes. Business exists to provide the material benefits desired by society. Higher education exists to provide primarily the intellectual and cultural benefits desired by society – the heritage of knowledge, values, and the creative and artistic expression conserved from the past and projected into the future. Because the goals of the two institutions are different and because the financing is different, the methods of management must also reflect these differences.

## Scientific Management

The study of management is a fairly new discipline, and the study of educational management is a very new discipline. Despite resistance, management has to be a function at all levels. The commonly identified functions of management including planning, organizing, communicating, motivating, and evaluating must be performed by all segments in community college education. Given the pressing problems of our times, it is imperative that the fundamental functions of management be systematically incorporated into community college management practices and not left to chance or accident. The justification for presenting the management by objectives theory as applied to community college education is only secondarily a justification based on efficiency and managerial competence. The primary justification of management by objectives in community colleges is an educational justification – in its contribution to educational programming; in its contribution to educational planning, coordination, and

evaluation; and in its contribution to student learning. Unfortunately, there is often great hostility and debate over management by objectives, and much of the hostility and debate appears to center around semantics. There appears to be great confusion over just what management by objectives is and what it proposes to do.

Management by objectives is best defined operationally. It is a process which provides both a framework and a methodology for systematically performing the basic functions of management. Management by objectives in an educational setting begins with the assessment of the educational needs in the community. Based on these needs, a philosophy or mission statement is developed, an inventory of resources is compiled, and a plan for implementing the management program is drawn up. Clearly stated institutional objectives are then developed. For each institutional objective, sets of program objectives are then developed which include support functions and course objectives. Provision is made for periodic review throughout the year and for systematic evaluation of the extent of achievement of objectives at the end of the year. A final part of the management by objectives process involves feedback to the individuals and program managers involved in the achievement of objectives, and systematic revision, readjustment, and reassessment on a yearly basis. Two approaches to implementing management by objectives currently being tested are th measurable institutional objectives approach at Mt. San Jacinto College and the participative approach of the Coast Community College District.

## The Measurable Institutional Objectives Approach to Management by Objectives

The measurable institutional objectives approach to management by objectives, developed at Mt. San Jacinto College, evolved over several years concurrent with the effort to develop measurable objectives for courses and an individualized instructional system of multi media. The development of a management by objectives system at this small community college was undertaken without special funding or additional staff.

From the first, Mt. San Jacinto College rejected the concept of using the management system as an evaluation device for mid-management or for instructor evaluation. This stance against the use of management by objectives as an instructor evaluation device was responsible more than any other single factor in first reducing faculty resistance to the system and in gaining their cooperation and support.

The use of formal community needs assessment questionnaires used so extensively in the

"participative management" model of management by objectives was also rejected by Mt. San Jacinto College as being too time-consuming for the very limited and possibly dubious results achieved. An informal process of community meetings augmented with records of the classes and special services requested by students and community members was used in lieu of community needs assessment questionnaires.

One of the major stumbling blocks to utilizing a management by objectives system for education has been to find an appropriate output measurement device for instruction. The staff at Mt. San Jacinto College believed that if college courses have measurable objectives for most of what students learn, if grading criteria are specific, and if both have been verified by outside experts, then "units completed" and "grade average" may provide the most useful output measures for instruction. Measurable objectives are sought for "most" of what the students learn. However, some student learnings are in the "currently unmeasurable" category. There are also some institutional support program objectives which are currently unmeasurable because effective measurement tools are not available. Admitting that there are course objectives which are currently unmeasurable significantly reduced faculty concerns about working toward an institutional objective approach to management by objectives.

One objection raised by some faculty members to using "units earned" as an output measure was that many students learned a great deal before they dropped out of class, but they received no units and, therefore, the output report would not credit the class with any educational product for those students. A method of issuing partial credit of one or two units for a three-unit class was suggested and eventually approved. This method of partial credit has several advantages to students and makes the output statistics more accurately reflect the actual learning which takes place. Partial credit better served the needs of students because they could see short-range objectives being accomplished more frequently and if, because of circumstances beyond their control, students had to drop out of a class, they received credit on their transcript for the units already accomplished. The partial credit provision also further emphasized the important principle that students receive units and grades for achieving objectives and not for "putting in time."

The Mt. San Jacinto staff also identified "lack of motivation" and "poor reading and writing basic skills" as significant constraints to student achievement. As a result, the college devoted time and resources to developing the "self-actualization by group process" (human potential seminars) to help improve student motivations. Poor reading and writing constraints were dealt with by expanding and revising the reading and writing laboratory, but this expansion is too new

to be able to report the results of this constraint reduction effort.

The Educational Audit

In order to give greater credibility to the achievement report and to gain the advice of an outsider, the college president recommended that an outside educational auditor be selected by the trustees and that he be given a set of audit specifications to follow. He was employed to sample the output statistics, to interview faculty and staff, and to make an oral audit report to the trustees in a public meeting. Detailed written reports were also completed. These reports verified the accuracy of grading plans, course objectives, and service function objectives and their output measures. (The educational auditor was a university professor who has recently been a community college president, and who had previously been a trained financial auditor.) His suggestions for improving the management system, especially in making certain objectives more accurately measurable, were very helpful for program improvement.

The measurable institutional objectives approach to management by objectives as applied so far at Mt. San Jacinto College has served to help solidify staff development efforts. It has also helped to make management decisions on alternative programs based on knowledge of constraints encountered and a knowledge of realistic costs related to output, and it has served as a unifying force for an innovative and effective student-centered educational program.

The Participative Approach to Management by Objectives

The Coast Community College District's efforts to implement management by objectives are based on two primary assumptions. First, that management by objectives is the best present-day representation of scientific management. Secondly, that the genuine involvement of the people in the educational community in the management process constitutes the best representation of the human dimension of management.

The identification and selection of an individual to guide the implementation of the program in the colleges was the first significant step in the management by objectives process. Important considerations in arriving at this decision included establishing the need for such a position, identifying desirable characteristics and skills, examining methods for selection, and determining the responsibilities and functions which the coordinator would carry out.

To get the project planning team off to a productive start, several steps were necessary: first, potential key members were identified; next, the possible contribution of each was analyzed before selection; and, finally, strategies were developed for the initial meeting of the planning team.

Most community college administrators will assert vigorously that their college or multi-campus district has its objectives already stated in the most recent accreditation report. Unfortunately, regardless of how well-written Coast District's objectives were, they frequently suffered from the lack of some significant element. By contrast, when needs are assessed and appropriately related objectives are developed, they can be utilized to examine the college's existing program structure and its educational and cost effectiveness. Obviously, the present program structure, whether it be organized by activities, divisions, departments, or degree programs, could provide a basis for an analysis of costs. This, however, would suggest that all programs addressed one or another of the district's needs and that all needs were addressed by one or another of the district's programs. This is probably not the case. Therefore, a careful comparison of educational needs and objectives and their priority ratings may offer valuable information about the necessity to revise the existing program structure.

An important purpose for examining the program structure is that it provides the basis for bringing together all of the elements needed for accountability. It will permit clarification of objectives, demonstrating the costs of programs working toward attaining objectives and evaluation data by program. Sub-programs or activities can also be analyzed or compared with others in different areas. Each of these tasks can be accomplished by establishing a classification scheme which groups the organization's activities according to the objectives that each activity serves. Within the resulting framework, information can be assembled on resource requirements, cost outputs, and benefits of all the activities carried on by the organization.

Each existing program, whether instructional or support, should contribute to one or more of the overall institutional objectives that have been established. Each objective has one or more performance indicators to aid in measuring the degree to which it is being attained. Programs contributing to these systemwide objectives will need to have their own program objectives measured. These program support objectives should specify activities that will clearly help reach the level of performance indicated for the various institutional objectives. Setting program objectives is the most direct answer to the key questions of accountability: "Where do we want

to go and how do we get there?" In order to make the establishment of program objectives meaningful and to permit later program analysis, priorities must be set. Evaluation subsequently enables those in the program to see how well their objectives are attained and provides a basis for the possible revision of priorities or the addition or deletion of certain program objectives. Establishing program objectives, determining priorities, and evaluating how well objectives are being achieved, will be the most significant activities toward making the Coast District more accountable and, more importantly, more educationally effective.

This model of humanistic management being implemented in the Coast Community College District is not proposed as something in addition to what college staff are now doing. It is proposed as an alternative to present management practices and educational practices. Humanistic management calls for a special type of leadership in the educational system. It requires leaders who are effective human beings, who have a good grasp of science-based management, and who are able to bring about genuine cooperation among all groups in the educational community. This is a big order, but the importance of the educational enterprise demands it.

## The Currently Unmeasurable Objectives Concept

As stated in Chapter II, management by objectives is a topic of great controversy. One area of great concern involves currently unmeasurable objectives. The use of currently unmeasurable objectives is the middle ground between those who propose that behavioral objectives can be written for nearly everything that is taught and those who believe that for some subjects there is so little of the important learning that can be measured that it is misleading to try and measure any learnings. Simply stated, the "currently unmeasurable objectives" approach asks those writing educational objectives to write all other objectives with accompanying statements which relate the experiences students have which, in the judgment of the instructor, will lead the student to achieve the unmeasurable objective. It is naturally hoped that as the instructor acquires additional experience in student evaluation he will gain insight into new ways to measure student achievement and will convert some currently unmeasurable objectives to measurable ones. It is apparent that a vocational auto mechanics course will have more measurable objectives than will an English course in Shakespeare. But the auto mechanics teacher will probably have as one of his objectives the fact that graduates should display certain skills in customer relations. The very nature of this objective makes it currently unmeasurable. Conversely, the English teacher of Shakespeare will have objectives which must be measured if he is to award grades and certify units earned. The necessity of listing the experience or activities

which the student is provided in order to accomplish the unmeasurable objectives puts a limitation to the unmeasurable objectives which can be claimed for a class or support programs. The preparation of measurable and currently unmeasurable objectives serves as a compromise which helps bring otherwise disbelieving faculty members into the process of writing course objectives. This is critically important because there seems to be no way to devise a complete management by objectives system without having the output of courses measured against course objectives.

Staff Evaluation

A second area of controversy concerns management by objectives as a faculty evaluation tool. At first glance, it would appear that one of the most likely ways to evaluate individual community college staff members and instructors would be through an appropriate management by objectives system. The real crux of evaluation is to improve instructional output and, therefore, it appears on the surface that the fairest evaluation system would be one that weeds out staff members with low output and rewards staff members based on their educational output – the number of objectives accomplished by students. In the case of mid-management in community colleges, the dean, the vice president, or department heads, it also appears that they should be evaluated on the basis of objectives for which these mid-management people are responsible.

There are several reasons why a management by objectives system must not be used as the faculty or administrator evaluation system. The first reason is that the mission of community colleges is to assist all people over 18 years of age who can profit from instruction. The students in a given class may all be marginally "able" to profit from instruction or they may all have a high capacity to learn the subject. Of course, the most prevalent situation is the class with a mixture of student abilities. If an instructor is going to be evaluated on the objectives accomplished by students, then in all fairness the students should have a similar capacity to learn and all must have a similar desire to learn. Since we have no known test instruments to make such a selection of students, and most community colleges would reject such homogenous groupings if test instruments were devised, we have to reject management by objectives as a primary evaluation tool.

If instructors feel that the management system is not a method of evaluation of individuals

but is a system to evaluate the progress that the whole institution is making toward institutional objectives, then they are more likely to participate effectively in objective setting and in constraint identification and reduction. The management by objectives system will give some indications about teachers who are teaching classes with low output, or deans whose program objectives have unusually low output accomplishment. These clues can alert those who apply the staff evaluation system to look for the reasons behind the unsatisfactory output data, but the evaluation of individuals should be separate from, and totally independent of, the management by objectives system.

## Management by Objectives and Fiscal Planning

Management by objectives cannot be useful until the academic planning it encompasses is integrated with fiscal planning. Too often, academic planning is carried on without regard to the cost implications or operating constraints. Many carefully developed academic plans are frequently termed "wish lists" and discarded without appropriate examination of possible alternatives and fiscal trade-offs. At another extreme, academic planners may limit their activities unduly by imagining fiscal constraints which do not exist in fact. Symptomatic of this is development of only those plans and approaches that are "fiscally realistic." Consequently, the full range of innovative approaches to community college education, constrained only by delivery system technology, may never be completely developed. Another problem is that fiscal planning is often conducted without regard to the subtleties involved in academic planning. An extensive exercise in setting and developing objectives is wasted if, due to fiscal constraints or efforts at "cost minimization," plans are rejected without further analysis. More useful planning results when costs and benefits of only partially attaining goals and objectives are examined. In this way, the trade-offs between results and dollars among policy alternatives are conveyed explicitly to policy makers.

Efforts at improving the art of managing higher education do not appear to have yet integrated fiscal and academic planning explicitly. The many planning and management tools developed by the National Center for Higher Education Management Systems, for example, have been directed largely at analyzing utilization and cost of college resources. Only recently has the Center begun to specifically explore the difficult area of outcomes. No Center tools have yet been developed for simultaneous analysis of outcomes or benefits and the costs of alternative college operations. More generally, many efforts at implementing planning, programming, and

budgeting systems in higher education have not been successful because they fail to provide for an integrated treatment of costs and benefits. In traditional fashion, efforts are directed to the less difficult, though still staff-consuming, task of identifying program costs.

Integrating academic and fiscal planning seems to require an approach that economically provides for the major planning decisions faced by community college managers. To be useful, the approach must somehow overcome the output measurement problem, provide for inclusion of concerns about student access, and recognize the need for simple, explicit presentations to managers who have limited time and information at their disposal. To do this, we suggest a ranking model which incorporates several tools basic to management by objectives efforts. This model employs a modification to traditional cost-benefit analyses predicated on ranking alternatives according to three criteria identified as essential to community college decision making:

(1) benefits or outcomes (sometimes termed program quality),

(2) costs, and

(3) access.

Correct planning solutions are possible only if all three criteria are considered simultaneously. If one alternative is preferred to others according to both benefit and cost criteria and satisfies the access criterion as well, the decision is clear. Unfortunately, the three criteria are not always compatible. For example, it may be that increases in college effectiveness (benefits compared to costs) may be obtained only at the expense of decreasing access, or vice versa. Ideally, most decisions would be constructed so that decision makers are not forced to subjectively weigh the access criterion against the effectiveness criteria.

As another example, suppose costs and funding are fixed beforehand. It is possible then that improvements in student access can be obtained only at the reduction of benefits or outcomes per student served. Hopefully, alternatives may be constructed so that decision makers are not forced to make such trade-offs. If such choices are necessary, however, they should be made explicit rather than implicit as is so often the case in existing planning efforts.

If costs are specified, the effort is to satisfy as many of the objectives for benefits and access

as possible. Given specific and fixed program objectives for benefits and access, managers will likely select the least cost means of meeting those objectives. Frequently, however, planning decisions do not have specific cost constraints and a useful decision model should handle problems in which values of all three criteria may be varied.

The technique suggested for tying academic and fiscal planning treats college planning decisions in a dual context that combines (1) academic and fiscal concerns on the one hand, and (2) college effectiveness and student access on the other. The nearly insurmountable problem of measuring college outcomes is solved by using program objectives specified during the management by objectives process. Needs assessment, vital to the community college requirement for knowing the educational needs and preferences of its community, is an integral part of the process. Ordered rankings of program alternatives according to each of the three criteria: benefits, costs, and access, are suggested to meet the problems presented by the fact that college outcomes, and the value of student access cannot be measured in dollars as are costs. These rankings of program alternatives provide an economical, understandable, and explicit means by which college managers may examine alternative investments and results and arrive at the best feasible planning choice. Such an approach would be impossible or, at best, extremely difficult without the tools of management by objectives.

## Management by Objectives–Fad or Fundamental Change?

Whether management by objectives will lead to fundamental changes in education, or whether it will become another educational fad that quickly passes remains to be tested in the colleges. One thing is certain – both the demands for increased participation of faculty and students in the educational process, and the demands of the public for increased accountability, efficiency, and effectiveness, must be satisfied.

The use of management by objectives to try to reconcile conflicting demands has both proponents and critics. Among criticisms of management by objectives are fears that courses will begin to emphasize the trivial, the mechanistic, and the easily quantifiable, that management by objectives will create a rigid reporting system and stifle innovation and experimentation in the colleges, that lack of staff training to participate in management by objectives will bog down the program at the very beginning, that an atmosphere of hostility and insecurity will be created because of pressures caused by management by objectives, and that individual resistance to change will prevent the management program from ever becoming effective.

Proponents of management by objectives counter these arguments with claims that management by objectives provides the most effective planning mechanism available, that management by objectives establishes a systematic and effective accountability process, that management by objectives can be a technique for improving morale by increasing the communication among all levels in the institution, that management by objectives is a mechanism to develop a more integrated educational context, and that management by objectives makes significant contributions to all of those who participate in community college education. For trustees, management by objectives provides a mechanism that allows them to develop and guide the mission of the college in terms of specific outcomes in being accountable for the public trust. For administrators, management by objectives offers a technique that scientifically and systematically insures that the major functions of management take place on the college campus. For the faculty, management by objectives provides a tool for more comprehensive planning of educational experiences and for more effective educational evaluation. In addition, areas of unnecessary duplication, new needs, and old irrelevant programs can be considered and evaluated more effectively than ever before. Students also benefit by knowing in advance what the instructor considers important, what the college as a whole proposes to offer them, and what each of the divisions has as objectives for their educational development. Curriculum planning can be facilitated and the adversary nature of much education might be overcome since the emphasis could shift from the hidden and the unknown to specific achievement of objectives. Finally, the public will be better informed about the mission of the college, about the justification for costs, and about the kinds of objectives that were achieved. Hopefully, the debate over management by objectives will be tested and resolved on a voluntary basis, in the colleges – allowing for the special context of education and academic freedom – rather than through mandated state programs based on inappropriate business management models, or the educational concepts of efficiency experts.

# BIBLIOGRAPHY

Academy for Educational Development, "The Contributions of Business Management to Higher Education Management," November, 1972

Astin, A.W.; Panos, K.J.; Creager, J.A.; National Norms for Entering College Freshmen, American Council on Education Research Reports, Volume 2, No. 1, 1967

Barnard, C.I., The Functions of the Executive, Harvard University Press, Cambridge, Massachusetts, 1938

Beck, Hubert, Men Who Control Our Universities, Kings Crown Press, New York, 1970

Bushnell, David, "Organizing for Change," New Practices for Community Colleges, McGraw-Hill Book Company, New York, 1973

Chronicle of Higher Education, December 11, 1972, p. 4

Churchman, C. W. The System's Approach, Delacorte Press, New York, 1968

Clark, Burton, "Faculty Organization and Authority," The Study of Academic Administration, Western Interstate Commission for Higher Education, October, 1963

College and University Trustees and Trusteeship, New York State Regents, Advisory Committee on Educational Leadership, 1966

Cohen, Arthur; and Roueche, John; Institutional Administrator or Educational Leader – The Junior College President, American Association of Junior Colleges, Washington, D.C., 1969

Corson, John, Governance of Colleges and Universities, McGraw Hill Book Company, New York, 1960

Cross, Patricia K., The Junior College Student: A Research Description, Educational Testing Service, Princeton, New Jersey, 1968

Dale, Ernest, "New Perspectives in Managerial Decision-Making," Journal of Business XXVI, January, 1953

Deegan, W.; McConnell, T.R.; Mortimer, K.; Stull, H.; Joint Participation in Decision Making, Center for Research and Development in Higher Education, Berkeley, California, 1970

Drucker, Peter, "Business Objectives and Survival Needs," Journal of Business VXXI, April, 1958

Eells, W.C., American Junior Colleges, Washington, D.C., American Council on Education, 1940

Enarson, Harold L. .Chronicle of Higher Education, June 18, 1973

Hartnett, R., College and University Trustees: Their Backgrounds, Roles, and Educational Attitude Educational Testing Service, Princeton, New Jersey, 1969

Hillway, Tyrus, The American Two-Year College, New York, Harper and Brothers, 1958

Hitt, William, Project Usher – Increasing the Effectiveness of Educational Management in Commun Colleges, Battelle Institute, Columbus, Ohio, January, 1973

Johnson, Milo, "The Institutional Objectives Approach to Management by Objectives," Mt. San Jacinto College, California, 1973

Johnson, Milo and Grafsky, Albert, Accountability, The American Technical Society, Chicago, 197

Kerr, Clark, The Uses of the University, Cambridge, Harvard University Press, 1963

Knoell, Dorothy, "Are Our Colleges Really Accessible to the Poor?", Junior College Journal, Volume 39, 1968, pp. 9 - 11

Koontz, Harold, "The Management Theory Jungle," Academy of Management Journal, IV, December, 1961

Lahti, Robert, "Management by Objectives," College and University Business, July, 1971

Leslie, L.; Bloom, K.; and Gillie, A.; Goals and Ambivalence: Faculty Values and the Community College Philosophy, Center for the Study of Higher Education, The Pennsylvania State University, 1971

Litchfield, Edward W., "Notes on a General Theory of Administration," in the Nature and Scope of Management; Scott, Foresman, and Company, Glenview, Illinois, 1966

March, J.G., and Simon, H.A., Organizations, New York: John Wiley and Sons, Inc., 1958

Martyn, Kenneth, "Increasing Opportunities for Disadvantaged Students:" Final Report; California Legislature Joint Committee on Higher Education, Sacramento, 1969, Unpublished

McConnell, T.R. and Heist, P., "The Diverse College Student Population," The American College, New York: John Wiley and Sons, Inc., 1962

McPherran, Archie, "Institutional Accountability," Unpublished paper presented at UCLA Leadership Conference, July, 1971

Medsker, L. and Tiller, D., Breaking the Access Barriers, New York: McGraw-Hill Book Company, 1960

Medsker, L., The Junior College: Progress and Prospect, New York: McGraw-Hill Book Company, 1960

Micek, Sidney and Wallhaus, Robert, "An Introduction to the Identification and Uses of Higher Education Outcome Information"; Technical Report 40, National Center for Higher Educatio Management Systems at Western Interstate Commissions for Higher Education, Boulder, Colorado, 1973

Mooney, Ross, "The Problems of Leadership in the University," Harvard Education Review, Volume 33, No. 1, Winter, 1963

Nordh, Deborah, Junior College Journal, March, 1971, p. 3

O'Bannion, Terry, Teachers for Tomorrow, University of Arizona Press, 1972

Rauth, M., The Trusteeship of Colleges and Universities, McGraw-Hill Book Company, New York 1970

Riesman, Constraint and Variety in American Education, University of Nebraska Press, 1958

Simon, Herbert A., Administrative Behavior, The Free Press, New York, 1966

"The Open-Door Colleges," A Special Report and Recommendations by the Carnegie Commission on Higher Educa[illegible], June, 1970

Thornton, J., The Community Junior College, John Wiley and Sons, 1960

Tilles, Seymour, "How to Evaluate Corporate Strategy," Wadia, M., The Nature and Scope of Management, Scott Foresman and Company, Glenview, Illinois, 1966

Trent, J. and Medsker, L., Beyond High School, Center for Research and Development in Higher Education, Berkeley, California, 1967

U.S. Office of Education, "Career Education," Department of Health, Education and Welfare, Publication O.E., 72-39, 1971, pg. 1

U.S. Office of Health, Education and Welfare, " A System Approach to Educational Management Operation P.E.P., 1968

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